ADOLESCENT PSYCHOLOGY



Nicole Arduini-Van Hoose

Hudson Valley Community College



Adolescent Psychology (Arduini-VanHoose)

This text is disseminated via the Open Education Resource (OER) LibreTexts Project (https://LibreTexts.org) and like the thousands of other texts available within this powerful platform, it is freely available for reading, printing, and "consuming."

The LibreTexts mission is to bring together students, faculty, and scholars in a collaborative effort to provide an accessible, and comprehensive platform that empowers our community to develop, curate, adapt, and adopt openly licensed resources and technologies; through these efforts we can reduce the financial burden borne from traditional educational resource costs, ensuring education is more accessible for students and communities worldwide.

Most, but not all, pages in the library have licenses that may allow individuals to make changes, save, and print this book. Carefully consult the applicable license(s) before pursuing such effects. Instructors can adopt existing LibreTexts texts or Remix them to quickly build course-specific resources to meet the needs of their students. Unlike traditional textbooks, LibreTexts' web based origins allow powerful integration of advanced features and new technologies to support learning.



LibreTexts is the adaptable, user-friendly non-profit open education resource platform that educators trust for creating, customizing, and sharing accessible, interactive textbooks, adaptive homework, and ancillary materials. We collaborate with individuals and organizations to champion open education initiatives, support institutional publishing programs, drive curriculum development projects, and more.

The LibreTexts libraries are Powered by NICE CXone Expert and were supported by the Department of Education Open Textbook Pilot Project, the California Education Learning Lab, the UC Davis Office of the Provost, the UC Davis Library, the California State University Affordable Learning Solutions Program, and Merlot. This material is based upon work supported by the National Science Foundation under Grant No. 1246120, 1525057, and 1413739.

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation nor the US Department of Education.

Have questions or comments? For information about adoptions or adaptions contact info@LibreTexts.org or visit our main website at https://LibreTexts.org.

The LibreTexts name, logo, and book covers are trademarked by LibreTexts, Inc. (a 501(c)(3) not-for-profit organization) and protected against unauthorized use.

This text was compiled on 10/20/2026

TABLE OF CONTENTS

Licensing

1: Studying Adolescent Psychology

1.1: Human Development

1.2: Key Issues in Human Development

1.3: The Forbidden Experiment

1.4: The Lifespan Perspective

1.5: Glossary

2: Psychological Research

2.1: The Scientific Method

2.2: Quantitative and Qualitative Approaches to Research

2.3: Descriptive Research

2.4: Methods of Data Collection

2.5: Analyzing Data- Correlational and Experimental Research

2.6: Correlational Research

2.7: Experimental Research

2.8: Developmental Research Designs

2.9: Challenges in Conducting Developmental Research

2.10: Glossary

3: Psychological Approaches

3.1: Understanding Theories

3.2: History of Developmental Psychology

3.3: Contemporary Psychological Approaches

3.4: Psychodynamic Approach

3.5: Behavioral Approach

3.6: Humanistic Approach

3.7: Cognitive Approach

3.8: Contextual Approach

3.9: Biopsychology and Evolutionary Psychology

3.10: Comparing Contemporary Approaches

3.11: Glossary

4: Physical Development during Adolescence

4.1: Puberty Begins

4.2: Sexual Development

4.3: Health Concerns during Adolescence

4.4: Glossary

5: Brain Development during Adolescence

5.1: Brain Basics

5.2: Brain Changes during Adolescence

5.3: Adolescent Sleep

5.4: Teens and Risk-Taking Behavior

5.5: Inside the Teenage Brain

5.6: Behavioral and Psychological Adjustment

5.7: Glossary

6: Cognitive Changes during Adolescence

6.1: Constructivist Theories

6.2: Psychological Constructivism

6.3: Social Constructivism

6.4: Information Processing Theories

6.5: Intelligence

6.6: Glossary

7: Learning, Achievement, and Work in Adolescence

7.1: Education

7.2: Understanding Learning Difficulties

7.3: Academic Achievement

7.4: Work and Career

7.5: Glossary

8: Identity Development

8.1: Identity Formation

8.2: Identity Development Theory

8.3: Domains of Identity

8.4: Glossary

9: Moral Development

9.1: Theories of Moral Development

9.2: Modern Views of Moral Development

9.3: Influences on Moral Development

9.4: Moral Reasoning in Adolescence

9.5: Glossary

10: Changing Family Relationships

10.1: Key Components of Good Parenting

10.2: Family Life

10.3: Child Maltreatment

10.4: Stress and Development

10.5: Glossary

11: Changing Peer Relationships

11.1: Peer Relationships

11.2: Sociometric Peer Status

11.3: Bullying

11.4: Teen Dating

11.5: Glossary

Index

Glossary

Detailed Licensing

Detailed Licensing

This page titled Adolescent Psychology (Arduini-VanHoose) is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

Licensing

A detailed breakdown of this resource's licensing can be found in ***Back Matter/Detailed Licensing***.

This page titled Licensing is shared under a license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

1: STUDYING ADOLESCENT PSYCHOLOGY

Learning Objectives

- Describe human development and its three domains: physical, cognitive, and psychosocial development
- Explain key human development issues about the nature of change: continuous/discontinuous, one course/multiple courses, and nature/nurture
- Describe Baltes' lifespan perspective with its key principles about development
- Explain what is meant by development being lifelong, multidimensional, and multidirectional
- Explain contextual influences on development

Adolescent psychology is the study of human development with a focus on the adolescent year and issues specific to this age group. In general, development examines patterns of growth, change, and stability by applying universal principles of development, including variations due to culture, race, ethnicity, and individual differences. The study of development investigates changes in the physical or biological, cognitive, and psychosocial or socioemotional domains, as well as the interactions between changes in these domains.

Adolescence is a developmental stage that has been defined as starting with puberty and ending with the transition to adulthood (approximately ages 10–20). Adolescence has evolved historically, with evidence indicating that this stage is lengthening as individuals start puberty earlier and transition to adulthood later than in the past. Puberty today begins, on average, at age 10–11 years for girls and 11–12 years for boys. This average age of onset has decreased gradually over time since the 19th century by 3–4 months per decade, which has been attributed to a range of factors including better nutrition, obesity, increased father absence, and other environmental factors (Steinberg, 2013). Completion of formal education, financial independence from parents, marriage, and parenthood have all been markers of the end of adolescence and beginning of adulthood, and all of these transitions happen, on average, later now than in the past. In fact, the prolonging of adolescence has prompted the introduction of a new developmental period called *emerging adulthood* that captures these developmental changes out of adolescence and into adulthood, occurring from approximately ages 18 to 29 (Arnett, 2000).

While we will be studying the period that we call adolescence, it is important to remember that developmental age ranges are social constructs. People mature at different rates and reach milestones at various points; we most often refer to milestone averages, but some people will be above or below the average. Environmental factors also influence development. Variations in development may exist in different cultures. When we discuss developmental theories and milestones, we are discussing the average, typical, or trend that applies to the most significant segments of the population. Individual and cultural variations exist and do not necessitate abnormality or concern.

You will discover that no matter the domain or topic of study, developmental psychologists consider several key questions. Is development continuous or discontinuous? Is development active or passive? Are there critical periods of development or only sensitive periods? Is development a result of nature or nurture? Does development vary due to cohort effects, sociocultural influences, and life events? In this chapter, we will explore these questions more in-depth.

1.1: Human Development

1.2: Key Issues in Human Development

1.3: The Forbidden Experiment

1.4: The Lifespan Perspective

1.5: Glossary

This page titled 1: Studying Adolescent Psychology is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

1.1: Human Development

Development refers to humans' physical, cognitive, and psychosocial development throughout their lifespan. What types of development are involved in each of these three domains, or areas, of life? Physical development involves growth and changes in the body, brain, senses, motor skills, and health and wellness. Cognitive development involves learning, attention, memory, language, thinking, reasoning, and creativity. Psychosocial development involves emotions, personality, and social relationships.

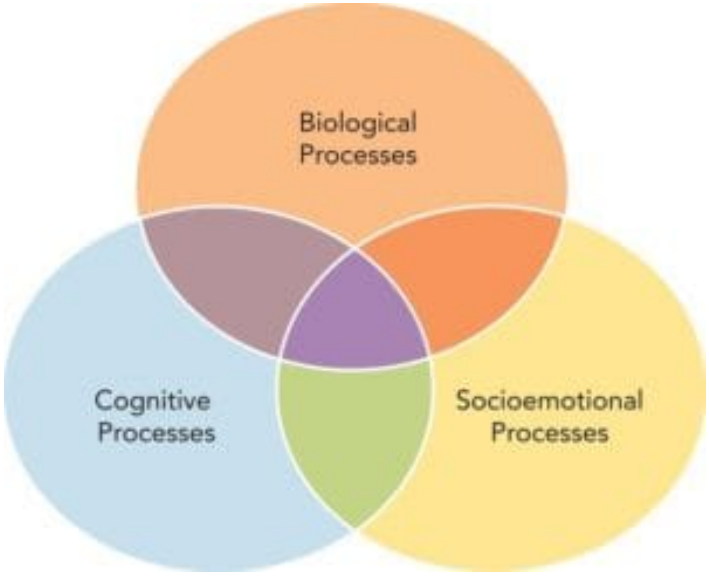


Figure 1.2.1. Physical, cognitive, and psychosocial development are interrelated.

Physical Domain

Many of us are familiar with the height and weight charts that pediatricians consult to estimate if babies, children, and teens are growing within normative ranges of physical development. We may also be aware of changes in children's fine and gross motor skills and their increasing coordination, particularly in sports. But we may not realize that physical development also involves brain development, which enables childhood motor coordination and greater coordination between emotions and planning in adulthood, as our brains are not done developing in infancy or childhood. Physical development also includes puberty, sexual health, fertility, menopause, changes in our senses, and healthy habits with nutrition and exercise.

Cognitive Domain

If we watch and listen to infants and toddlers, we can't help but wonder how they learn so much so fast, particularly regarding language development. Then as we compare young children to those in middle childhood, there appear to be considerable differences in their ability to think logically about the concrete world around them. Cognitive development includes mental processes, thinking, learning, and understanding, and it doesn't stop in childhood. Adolescents develop the ability to think logically about the abstract world (and may like to debate matters with adults as they exercise their new cognitive skills!). Moral reasoning develops further, as does practical intelligence—wisdom may develop with experience over time. Memory abilities and different forms of intelligence tend to change with age. Brain development and the brain's ability to adapt and compensate for losses are significant to cognitive functions across the lifespan, too.

Psychosocial Domain

Development in the psychosocial (or socioemotional) domain involves what's going on both psychologically and socially. Early on, the focus is on infants and caregivers, as temperament and attachment are significant. As the social world expands and the child

grows psychologically, different types of play and interactions with other children and teachers become essential. Psychosocial development involves emotions, personality, self-esteem, and relationships. Peers become more important for adolescents, who are exploring new roles and forming their own identities. Dating, romance, cohabitation, marriage, having children, and finding work or a career are all parts of the transition into adulthood. Psychosocial development continues across adulthood with similar (and some different) developmental issues of family, friends, parenting, romance, divorce, remarriage, blended families, caregiving for elders, becoming grandparents and great-grandparents, retirement, new careers, coping with losses, and death and dying.

As you may have already noticed, physical, cognitive, and psychosocial development are often interrelated. Puberty exemplifies this interaction well. Puberty is a biological change that releases hormones that spurs the maturation of sex organs and physical growth. However, puberty also triggers changes within the brain that affect cognition, emotions, and social relationships. Puberty often comes with mood swings but also an improved ability to self-regulate. Puberty is also when relationships change with parents and peers. While puberty may be a topic within the physical domain, there is clearly an interaction with the other areas.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 1.2.1. *Domains in Development* describes the three domains and how those domains interact.

https://assessments.lumenlearning.co...essments/16494

Who Studies Development and Why?

Many academic disciplines contribute to the study of development, and developmental psychology is related to other applied fields. The study of development informs several applied fields in psychology, including educational psychology, psychopathology, and forensic developmental psychology. It also complements several other specific areas of psychology, including social psychology, cognitive psychology, and comparative psychology. This multidisciplinary course is made up of contributions from researchers in the areas of biology, health care, anthropology, nutrition, and sociology, among others.

The main goals of those studying development are to describe, predict, and explain changes. Throughout this course, we will describe observations during development, predict courses and milestones for change, and then examine how theories explain these changes.

Candela Citations

CC licensed content, Original

- Domains in Human Development. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...n-development/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Lifespan Development. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...andevelopment/. **License**: CC BY: Attribution
- Lifespan Development. **Authored by**: Martha Lally and Suzanne Valentine-French. **Provided by**: College of Lake County Foundation. **Retrieved from**: http://dept.clcillinois.edu/psy/Life...evelopment.pdf. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

All rights reserved content

- Domains in Development. **Authored by**: Prof Newton. **Retrieved from**: https://youtu.be/pgaGa-B_5po. **License**: *All Rights Reserved*

This page titled 1.1: Human Development is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

1.2: Key Issues in Human Development

There are many different theoretical approaches regarding human development. As we evaluate them in this course, recall that development focuses on how people change, and the approaches address the nature of change in different ways:

- Are changes an active or passive process?
- Is the change smooth or uneven (continuous versus discontinuous)?
- Is this pattern of change the same for everyone, or are there different patterns of change (one course of development versus many courses)?
- Are there prescribed periods in which change must occur (critical and sensitive periods)?
- How do genetics and environment interact to influence development (nature versus nurture)?

Is Development Active or Passive?

How much does one play a role in their developmental path? Are we at the whim of our genetic inheritance or the environment that surrounds you, or are we able to decide and steer our development? Some theorists believe that humans play a much more active role in their development. Piaget, for instance, believed that children actively explore their world and construct new ways of thinking to explain the things they experience. Humanist theorists forward that people have self-determination. In contrast, many behaviorists view humans as being more passive in the developmental process, with outcomes being determined by their experiences. Evolutionary psychologists emphasize the role of heredity in determining development. As we explore various theories, ask yourself whether each approach considers development to be an active or passive process.

Is Development Continuous or Discontinuous?

Is human development best characterized as a slow, gradual process, or as one of more abrupt change? The answer to that question often depends on which developmental theorist you ask and which topic is being studied. **Continuous development** theories view development as a cumulative process, gradually improving on existing skills (see figure below). With this type of development, there is a gradual change. Consider, for example, a child's physical growth: adding inches to their height year by year. In contrast, theorists who view development as **discontinuous** believe that development takes place in unique stages and that it occurs at specific times or ages. With this type of development, the change is more sudden, such as an infant's ability to demonstrate awareness of object permanence (which is a cognitive skill that develops toward the end of infancy, according to Piaget's cognitive theory—more on that theory in the next module).

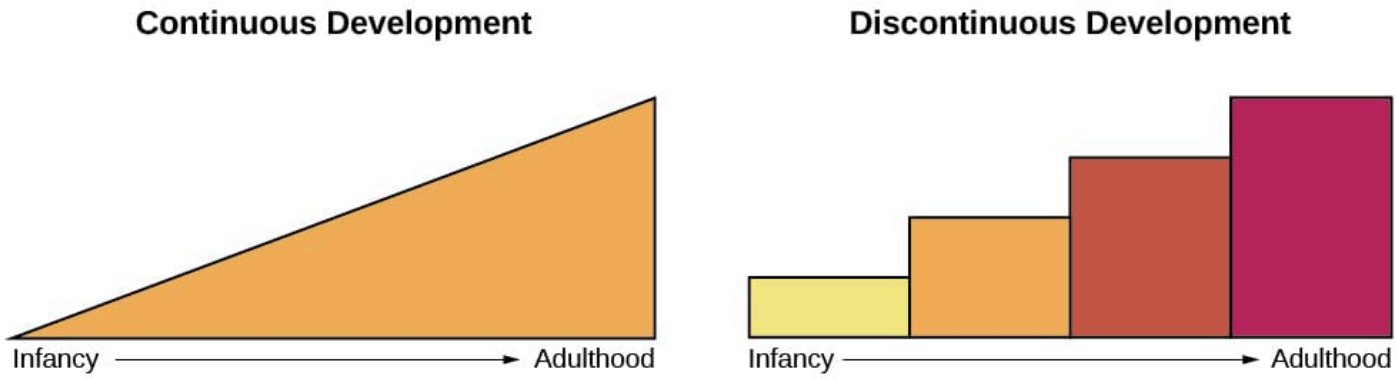


Figure 1.3.1. Visualizations of continuous and discontinuous development.

Is There One Course of Development or Many?

Is development essentially the same, or universal, for all children (i.e., there is one course of development) or does development follow a different course for each child, depending on the child's specific genetics and environment (i.e., there are many courses of development)? Do people across the world share more similarities or more differences in their development? How much do

culture and genetics influence a child's behavior?

Stage theories hold that the sequence of development is universal. For example, in cross-cultural studies of language development, children from around the world reach language milestones in a similar sequence (Gleitman & Newport, 1995). Infants in all cultures coo before they babble. They begin babbling at about the same age and utter their first word around 12 months old. Yet we live in diverse contexts that have a unique effect on each of us. For example, researchers once believed that motor development followed one course for all children regardless of culture. However, childcare practices vary by culture, and different practices have been found to accelerate or inhibit the achievement of developmental milestones such as sitting, crawling, and walking (Karasik, Adolph, Tamis-LeMonda, & Bornstein, 2010).

For instance, let's look at the Aché society in Paraguay. They spend a significant amount of time foraging in forests. While foraging, Aché mothers carry their young children, rarely putting them down to protect them from getting hurt in the forest. Consequently, their children walk much later: They walk around 23–25 months old, in comparison to infants in Western cultures who begin to walk around 12 months old. However, as Aché children become older, they are allowed more freedom to move about, and by about age 9, their motor skills surpass those of U.S. children of the same age: Aché children can climb trees up to 25 feet tall and use machetes to chop their way through the forest (Kaplan & Dove, 1987). As you can see, our development is influenced by multiple contexts, so the timing of basic motor functions may vary across cultures. However, the functions are present in all societies.

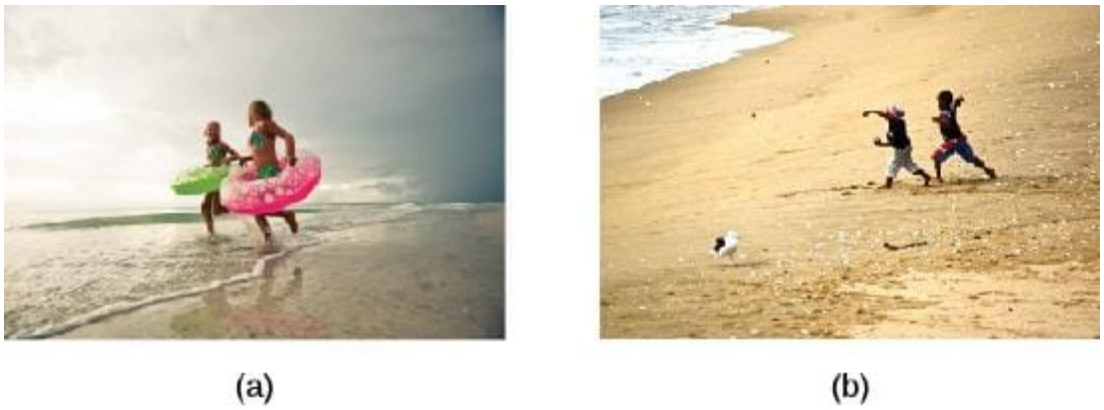


Figure 1.3.2. All children across the world love to play. Whether in (a) Florida or (b) South Africa, children enjoy exploring sand, sunshine, and the sea.

Are there Critical or Sensitive Periods of Development?

Various developmental milestones are universal in timing. For example, most children begin learning and expressing language during their first year. However, what happens if a person misses that window of typical experience? What if the child were not exposed to language early in life, could they learn language in later years? Does the timing of experience influence development, and can it be corrected later?

Psychologists believe that there are time spans in which a person is biologically ready for certain developments, but successful progress is reliant on the person having essential experiences during that time. If these experiences fail to occur or occur after the time span ends, then the person will not develop normally or may not fully recover, even with later intervention.

Some aspects of development have critical periods; finite time spans in which specific experiences must occur for successful development. Once this period ends, later experiences would have no impact on this aspect of development. Failure to have the necessary experiences during the critical period will result in permanent impairments. For instance, a person that does not receive minimal nutrition during childhood would not reach their full height potential by adulthood. Even with excellent nutrition during adulthood, they would never grow taller because their critical period of growth has ended.

More often, developmental aspects are considered to have sensitive periods. Like critical periods, a sensitive period requires particular experiences during a specific time for development to occur. However, with sensitive periods, experiences after the period ends can support developmental gains later in life. It is not to say that post-period interventions will always be simple or successful. For example, someone that was not exposed to language in early childhood, with intervention and great effort, may be able to make some gains in late childhood, but may not fully recover all language-related skills.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 1.3.1. *Sensitive vs Critical Periods of Learning* explains the differences between the two

How Do Nature and Nurture Influence Development?

Are we who we are because of genetics, or are we who we are because of our environment? For instance, why do biological children sometimes act like their parents—is it because of genetics or because of early childhood environment and what the child has learned from their parents? What about children who are adopted—are they more like their biological families or more like their adoptive families? And how can siblings from the same family be so different?

This longstanding question is known in psychology as the nature versus nurture debate. For any particular aspect of development, those on the side of **nature** would argue that heredity plays the most important role in bringing about that feature. While those on the side of **nurture** would say that one's environment is most significant in shaping the way we develop. However, most scholars agree that there is a constant interplay between the two forces. It is difficult to isolate the root of any single outcome as a result solely of nature or nurture.

We are all born with specific genetic traits inherited from our parents, such as eye color, height, and certain personality traits. Beyond our basic genotype, however, there is a deep interaction between our genes and our environment. Our unique experiences in our environment influence whether and how particular traits are expressed, and at the same time, our genes influence how we interact with our environment (Diamond, 2009; Lobo, 2008). There is a reciprocal interaction between nature and nurture as they both shape who we become, but the debate continues as to the relative contributions of each.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 1.3.2. *Gene-Environment Interaction* explains how nature and nurture interact to influence development.

https://assessments.lumenlearning.co...essments/16495

Candela Citations

CC licensed content, Original

- Key Issues in Human Development. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...n-development/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Human Development. **Authored by**: Margaret Clark-Plaskie. **Provided by**: Lumen Learning. **Retrieved from**:

https://courses.lumenlearning.com/wm...n-development/. **License**: CC BY: Attribution

CC licensed content, Specific attribution

- Gene Environment Interaction. **Authored by**: Ryan Scott Patton. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/sMyZO9YDlk8. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

All rights reserved content

- Sensitive vs Critical periods of learning - VCE Psychology. **Authored by**: Andrew Scott. **Retrieved from**: https://www.youtube.com/watch?v=ytRC15vIA24. **License**: *All Rights Reserved*

This page titled 1.2: Key Issues in Human Development is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

1.3: The Forbidden Experiment

As previously discussed, psychologists are interested in the role of nature and nurture on human development. It is almost impossible to remove the influence of either nature or nurture to study only the influence of the other. The closest that we have come to this is the study of feral children.

A **feral child** (also called **wild child**) is a human child who has lived isolated from human contact from a very young age, and so has had little or no experience of human care, behavior, or human language. There are several confirmed cases and other speculative ones. Feral children may have experienced severe abuse or trauma before being abandoned or running away.

The following three cases are examples of feral children that spent part of their lives isolated from normal human society. Examining these cases helps us better understand the key concept of nature versus nurture. Note some of the differences between these cases and consider why these differences may exist.

Oxana



John



Genie



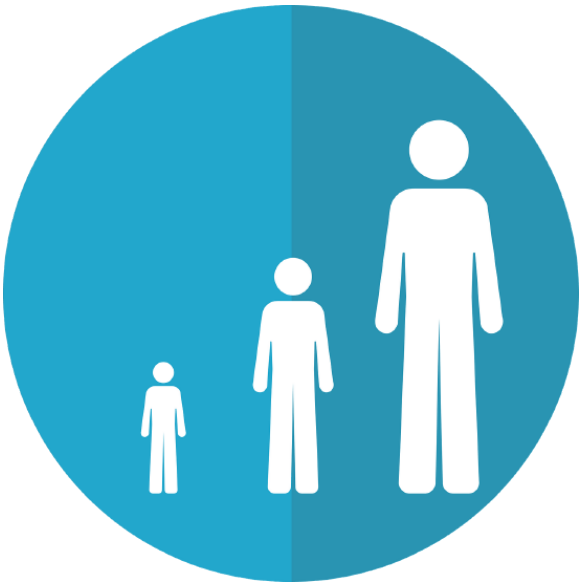
Candela Citations

CC licensed content, Shared previously

- Feral Children. **Provided by**: Wikipedia. **Retrieved from**: https://en.wikipedia.org/wiki/Feral_child. **License**: CC BY: Attribution

This page titled 1.3: The Forbidden Experiment is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

1.4: The Lifespan Perspective



Development has been presented as a theoretical perspective, proposing several fundamental, theoretical, and methodological principles about the nature of human development. An attempt by researchers has been made to examine whether research on the nature of development suggests a specific metatheoretical worldview. Several beliefs, taken together, form the "family of perspectives" that contribute to this particular view.

German psychologist Paul Baltes (1987), a leading expert on development, established one of the most widely accepted approaches to studying development called the **lifespan perspective**. This approach is based on several key assumptions:

- Development occurs across one's entire life, or is *lifelong*.
- Development is *multidimensional,* meaning it involves the dynamic interaction of factors like physical, emotional, and psychosocial development
- Development is *multidirectional* and results in gains and losses throughout life
- Development is *plastic*, meaning that characteristics are malleable or changeable.
- Development is influenced by *contextual* and socio-cultural influences.
- Development is *multidisciplinary*.

Development is Lifelong

Lifelong development means that change is not completed in infancy or childhood or at any specific age; it encompasses the entire lifespan, from conception to death. The study of development traditionally focused almost exclusively on the changes occurring from conception to adolescence and the gradual decline in old age; it was believed that the five or six decades after adolescence yielded little to no developmental change at all. The current view reflects the possibility that specific changes in development can occur later in life, without having been established at birth. Later events in one's life can transform the early events of one's childhood. This belief clearly emphasizes that all stages of the lifespan contribute to the regulation of the nature of human development.

Many diverse patterns of change, such as direction, timing, and order, can vary among individuals and affect how they develop. For example, the developmental timing of events can affect individuals in different ways because of their current level of maturity and understanding. As individuals move through life, they are faced with many challenges, opportunities, and situations that impact their development. Remembering that development is a lifelong process helps us gain a broader perspective on the meaning and impact of each event.

Development is Multidimensional

By multidimensionality, Baltes is referring to the fact that a complex interplay of factors influences development across the lifespan, including biological, cognitive, and socioemotional changes. Baltes argues that a dynamic interaction of these factors is what affects an individual's development.

For example, in adolescence, puberty consists of physiological and physical changes with changes in hormone levels, the development of primary and secondary sex characteristics, alterations in height and weight, and several other bodily changes. But these are not the only types of changes taking place; there are also cognitive changes, including the development of advanced cognitive faculties such as the ability to think abstractly. There are also emotional and social changes involving regulating emotions, interacting with peers, and possibly dating. The fact that the term puberty encompasses such a broad range of domains illustrates the multidimensionality component of development (think back to the physical, cognitive, and psychosocial domains of human development we discussed earlier).

Development is Multidirectional

Baltes states that the development of a particular domain does not occur in a strictly linear fashion but that the development of certain traits can be characterized as having the capacity for both an increase and a decrease in efficacy over the course of an individual's life.

If we use the example of puberty again, we can see that certain domains may improve or decline in effectiveness during this time. For example, self-regulation is one domain of puberty that undergoes profound multidirectional changes during the adolescent period. During childhood, individuals have difficulty effectively regulating their actions and impulsive behaviors. Scholars have noted that this lack of effective regulation often results in children engaging in behaviors without fully considering the consequences of their actions. Throughout puberty, neuronal changes modify this unregulated behavior by increasing the ability to regulate emotions and impulses. Inversely, the ability of adolescents to engage in spontaneous activity and creativity, both domains commonly associated with impulse behavior, decreases over the adolescent period in response to changes in cognition. Neuronal changes to the limbic system and prefrontal cortex of the brain, which begin in puberty, lead to the development of self-regulation, and the ability to consider the consequences of one's actions (though recent brain research reveals that this connection will continue to develop into early adulthood).

Extending on the premise of multidirectionality, Baltes also argued that development is influenced by the "joint expression of features of growth (gain) and decline (loss)" (Baltes, 1987). This relation between developmental gains and losses occurs in a direction to selectively optimize particular capacities. This requires the sacrificing of other functions, a process known as selective optimization with compensation. According to the process of selective optimization, individuals prioritize particular functions above others, reducing the adaptive capacity of particulars for specialization and improved the efficacy of other modalities.

The acquisition of effective self-regulation in adolescents illustrates this gain/loss concept. As adolescents gain the ability to regulate their actions effectively, they may be forced to sacrifice other features to selectively optimize their reactions. For example, individuals may sacrifice their capacity to be spontaneous or creative if they are constantly required to make thoughtful decisions and regulate their emotions. Adolescents may also be forced to sacrifice their fast reaction times toward processing stimuli in favor of being able to consider the consequences of their actions fully.

https://assessments.lumenlearning.co...essments/16497

Development is Plastic

Plasticity denotes intrapersonal variability and focuses heavily on the potentials and limits of the nature of human development. The notion of plasticity emphasizes that there are many possible developmental outcomes and that the nature of development is much more open and pluralistic than originally implied by traditional views; there is no single pathway that must be taken in an individual's development across the lifespan. Plasticity is imperative to current research because the potential for intervention is derived from the notion of plasticity in development. Undesired development or behaviors could potentially be prevented or changed.

As an example, recently, researchers have been analyzing how other senses compensate for the loss of vision in blind individuals. Without visual input, blind humans have demonstrated that tactile and auditory functions still fully develop, and they can use

tactile and auditory cues to perceive the world around them. One experiment designed by Röder and colleagues (1999) compared the auditory localization skills of people who are blind with people who are sighted by having participants locate sounds presented either centrally or peripherally (lateral) to them. Both congenitally blind adults and sighted adults could locate a sound presented in front of them with precision, but people who are blind were superior in locating sounds presented laterally. Currently, brain-imaging studies have revealed that the sensory cortices in the brain are reorganized after visual deprivation. These findings suggest that when vision is absent in development, the auditory cortices in the brain recruits areas that are normally devoted to vision, thus becoming further refined.

https://assessments.lumenlearning.co...essments/16498

Development is Contextual

In Baltes' theory, the paradigm of contextualism refers to the idea that three systems of biological and environmental influences work together to influence development. Development occurs in context and varies from person to person, depending on factors such as a person's biology, family, school, church, profession, nationality, and ethnicity. Baltes identified three types of influences that operate throughout the life course: normative age-graded influences, normative history-graded influences, and non-normative influences. Baltes wrote that these three influences operate throughout the life course, their effects accumulate with time, and, as a dynamic package, they are responsible for how lives develop.

Normative age-graded influences are those biological and environmental factors that have a strong correlation with chronological age, such as puberty or menopause, or age-based social practices such as beginning school or entering retirement. **Normative history-graded influences** are associated with a specific time period that defines the broader environmental and cultural context in which an individual develops. For example, development and identity are influenced by historical events of the people who experience them, such as the Great Depression, WWII, Vietnam, the Cold War, the War on Terror, or advances in technology.

This has been exemplified in numerous studies, including Nesselroade and Baltes', showing that the level and direction of change in adolescent personality development were influenced as strongly by the socio-cultural settings at the time (in this case, the Vietnam War) as age-related factors. The study involved individuals of four different adolescent age groups who all showed significant personality development in the same direction (a tendency to occupy themselves with ethical, moral, and political issues rather than cognitive achievement). Similarly, Elder showed that the Great Depression was a setting that significantly affected the development of adolescents and their corresponding adult personalities by showing a similar common personality development across age groups. Baltes' theory also states that the historical socio-cultural setting had an effect on the development of an individual's intelligence. The areas of influence that Baltes thought most important to the development of intelligence were health, education, and work. The first two areas, health, and education, significantly affect adolescent development because healthy children who are educated effectively will tend to develop a higher level of intelligence. The environmental factors, health, and education have been suggested by Neiss and Rowe to have as much effect on intelligence as inherited intelligence.

Non-normative influences are unpredictable and not tied to a certain time in a person's development or to a historical period. They are the unique experiences of an individual, whether biological or environmental, that shape the development process. These could include milestones like earning a master's degree or getting a certain job offer or other events like going through a divorce or coping with the death of a child.

The most important aspect of contextualism as a paradigm is that the three systems of influence work together to affect development. Concerning adolescent development, the age-graded influences would help to explain the similarities within a cohort, the history-graded influences would help to explain the differences between cohorts, and the non-normative influences would explain the idiosyncrasies of each adolescent's individual development. When all influences are considered together, it provides a broader explanation of an adolescent's development.

https://assessments.lumenlearning.co...essments/16499

Other Contextual Influences on Development: Cohort, Socioeconomic Status, and Culture

What is meant by the word "context"? It means that we are influenced by when and where we live. Our actions, beliefs, and values are a response to the circumstances surrounding us. Sternberg describes contextual intelligence as the ability to understand what

is called for in a situation (Sternberg, 1996). The key here is to understand that behaviors, motivations, emotions, and choices are all part of a bigger picture. Our concerns are such because of who we are socially, where we live, and when we live; they are part of a social climate and set of realities that surround us. Important social factors include cohort, social class, gender, race, ethnicity, and age. Let's begin by exploring two of these: cohort and social class.

A **cohort** is a group of people who are born at roughly the same time period in a particular society. Cohorts share histories and contexts for living. Members of a cohort have experienced the same historical events and cultural climates which have an impact on the values, priorities, and goals that may guide their lives. Consider the differences in experiences of someone from the 'Silent' generation that lived with constant scarcity and rationing during WWII versus the economic prosperity that followed for the 'Baby Boomer' generation and how those historical contexts influence their development.

Watch It

Video 1.4.1. *Generations Throughout History* describes the normative history-graded influences that shaped the development of seven generations over the past 125 years of United States history. Can you identify your generation? Does the description seem accurate?

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Another context that affects our lives is our social standing, socioeconomic status, or social class. **Socioeconomic status** is a way to identify families and households based on their shared levels of education, income, and occupation. While there is certainly individual variation, members of a social class tend to share similar lifestyles, patterns of consumption, parenting styles, stressors, religious preferences, and other aspects of daily life. We also find differences between social classes in these and other areas of development. Often, those in low socioeconomic groups, people living in poverty, are disadvantaged, lack opportunities, and have different life experiences than those with more financial stability and wealth.

Poverty describes the state of not having access to material resources, wealth, or income, and also includes the lack of opportunity to improve one's standard of living and acquire resources. **Life chances** is a term used to describe someone's access to marketplace resources—essentially, how likely it is in their environment that they might be able to find employment or have a social safety net. Someone who is living in poverty but has high life chances may be able to improve their economic standing, but someone with low life chances will likely have a consistently low standard of living. The term for a person's ability to change their economic status in a society is known as **social mobility**.

When families have low social mobility, they may become trapped in poverty for generations; we refer to this as the **cycle of poverty**. Typically, these families have either limited or nonexistent social and economic resources. There are many disadvantages that collectively work in a circular process to make it virtually impossible for individuals to break the cycle of poverty. They are less likely to have financial capital, education, job skills, reliable transportation, and social capital (connections to people with specialized knowledge or in power). Without these resources, poverty-stricken individuals experience disadvantages that, in turn, increase their poverty.

Additionally, those living in poverty suffer disproportionately from hunger, poor nutrition, and exhibit disproportionately high rates of physical and mental health issues. These illnesses can be disabling, preventing people in poverty from working, thus reducing one's opportunities to improve their social and economic status.

Finally, poverty increases the risk of homelessness. People who are homeless have low access to neighborhood resources, high-status social contacts, or basic services such as a phone line, limiting their ability to improve their economic position, again perpetuating poverty.

Culture is often referred to as a blueprint or guideline shared by a group of people that specifies how to live. It includes ideas about what is right and wrong, what to strive for, what to eat, how to speak, what is valued, as well as what kinds of emotions are called for in certain situations. Culture teaches us how to live in a society and allows us to advance because each new generation can benefit from the solutions found and passed down from previous generations.

Culture is learned from parents, schools, churches, media, friends, and others throughout a lifetime. The kinds of traditions and values that evolve in a particular culture serve to help members function in their society and value their society. We tend to believe that our own culture's practices and expectations are the right ones. This belief that our own culture is superior is called ethnocentrism and is a normal by-product of growing up in a culture. It becomes a roadblock, however, when it inhibits understanding of cultural practices from other societies. Cultural relativity is an appreciation for cultural differences and the understanding that cultural practices are best understood from the standpoint of that particular culture.

Culture is a crucial context for human development, and understanding development requires being able to identify which features of development are culturally based. This understanding is somewhat new and still being explored. So much of what developmental theorists have described in the past has been culturally bound and difficult to apply to various cultural contexts. For example, Erikson's theory that teenagers struggle with identity assumes that all teenagers live in a society in which they have many options and must make an individual choices about their future. In many parts of the world, one's identity is determined by family status or society's dictates. In other words, there is no choice to make.

Even the most biological events can be viewed in cultural contexts that are incredibly varied. Consider two very different cultural responses to menstruation in young girls. In the United States, girls in public schools often receive information on menstruation around 5th grade, get a kit containing feminine hygiene products, and receive some sort of education about sexual health. Contrast this with some developing countries where menstruation is not publicly addressed, or where girls on their period are forced to miss school due to limited access to feminine products or unjust attitudes about menstruation.

How Does socioeconomic status affect language development?

The achievement gap refers to the persistent difference in grades, test scores, and graduation rates that exist among students of different ethnicities, races, and—in certain subjects—sexes (Winerman, 2011). Research suggests that these achievement gaps are strongly influenced by differences in socioeconomic factors that exist among the families of these children. Low-income children perform significantly more poorly than their middle- and high-income peers on a number of educational variables: They have significantly lower standardized test scores, graduation rates, and college entrance rates, and they have much higher school dropout rates. Many of these problems start before the children even enter school.

Psychologists Betty Hart and Todd Risley (2006) spent their careers looking at early language ability and progression of children at various income levels. In one longitudinal study, researchers found that although all the parents in the study engaged and interacted with their children, middle- and high-income parents interacted with their children differently than low-income parents. The researchers found that middle- and high-income parents talk to their children significantly more, starting when the children are infants. By age 3, high-income children knew almost double the number of words known by low-income children, and they heard about 30 million more words than their low-income counterparts (Hart & Risley, 2003). These gaps become more pronounced by kindergarten, with high-income children scoring 60% higher on achievement tests than their low-income peers (Lee & Burkam, 2002).

There are solutions to this problem. Experts are working with low-income families to encourage them to speak more to their children and designing preschools in which students from diverse economic backgrounds are placed in the same classroom (Schechter & Byeb, 2007).

Development is Multidisciplinary

Any single discipline's account of development across the lifespan would not be able to express all aspects of this theoretical framework. That is why it is suggested explicitly by lifespan researchers that a combination of disciplines is necessary to understand development. Psychologists, sociologists, neuroscientists, anthropologists, educators, economists, historians, medical researchers, and others may all be interested and involved in research related to the normative age-graded, normative history-graded, and nonnormative influences that help shape development. Many disciplines contribute important concepts that integrate knowledge, which may ultimately result in the formation of a new and enriched understanding of development across the lifespan.

THINK IT OVER

- Consider your cohort. Can you identify it? Does it have a name, and if so, what does the name imply? To what extent does your cohort shape your values, thoughts, and aspirations? (Some cohort labels popularized in the media for generations in the United States include Baby Boomers, Generation X, Millennials, and Generation Z.)
- Think of other ways culture may have affected your development. How might cultural differences influence interactions between teachers and students, nurses and patients, or other relationships?

Candela Citations

CC licensed content, Original

- The Lifespan Perspective. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...n-perspective/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- The Lifespan Perspective. **Authored by**: Margaret Clark-Plaskie. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...andevelopment/. **License**: CC BY-SA: Attribution-ShareAlike
- Poverty. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/bo...apter/poverty/. **License**: CC BY-SA: Attribution-ShareAlike

This page titled 1.4: The Lifespan Perspective is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

continuous development: the idea that development is a progressive and cumulative process, gradually improving on existing skills

cohort: a group of people who are born at roughly the same period in a particular society. Cohorts share histories and contexts for living[/glossary-definition

culture: blueprint or guideline shared by a group of people that specifies how to live; passed down from generation to generation; learned from parents and others

cycle of poverty: when families with ow social mobility become trapped in poverty for generations

discontinuous development: idea that development takes place in unique stages and occurs at specific times or ages

life chances: someone's access to marketplace resources

lifespan perspective: an approach to studying development which emphasizes that development is lifelong, multidimensional, multidirectional, plastic, contextual, and multidisciplinary

nature: the influences of biology and genetics on behavior

non-normative influences: unpredictable influences not tied to a certain developmental time, personally or historical period

normative age-graded influences: biological and environmental factors that have a strong correlation with chronological age

normative history-graded influences: influences associated with a specific time period that define the broader bio-cultural context in which an individual develops

nurture: environmental, social, and cultural influences of behavior

poverty: the state of not having access to material resources, wealth, or income

social mobility: the ability to change one's economic status in a society

socioeconomic status: a way to identify families and households based on their shared levels of education, income, and occupation

This page titled 1.5: Glossary is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

2: PSYCHOLOGICAL RESEARCH

Learning Objectives

- Explain how the scientific method is used in researching development
- Compare various types and objectives of developmental research
- Describe methods for collecting research data (including observation, survey, case study, content analysis, and secondary content analysis)
- Explain correlational research
- Describe the value of experimental research
- Compare the advantages and disadvantages of developmental research designs (cross-sectional, longitudinal, and sequential)
- Describe challenges associated with conducting research in lifespan development

How do we know what changes and stays the same (and when and why) in development? We rely on research that utilizes the scientific method so that we can have confidence in the findings. How data are collected and analyzed vary by the type of information sought. The design of the study will affect the data and the conclusions that can be drawn from them about actual age changes.

Research in Development

An essential part of learning any science is having a basic knowledge of the techniques used in gathering information. The hallmark of scientific investigation is that of following a set of procedures designed to keep questioning or skepticism alive while describing, explaining, or testing any phenomenon. Not long ago, a friend said to me that he did not trust academicians or researchers because they always seem to change their stories. That, however, is precisely what science is all about; it involves continuously renewing our understanding of the subjects in question and an ongoing investigation of how and why events occur. Science is a vehicle for going on a never-ending journey. In the area of development, we have seen changes in recommendations for nutrition, in explanations of psychological states as people age, and in parenting advice. So think of learning about human development as a lifelong endeavor.

Personal Knowledge

How do we know what we know? Take a moment to identify two things that you know about adolescence. Now, how do you know? Chances are you know these things based on your own history (experiential reality), what others have told you, or cultural ideas (agreement reality) (Seccombe and Warner, 2004). There are several problems with personal inquiry, or drawing conclusions based on our personal experiences. Read the following sentence aloud:

Paris in the
the spring

Are you sure that is what it said? Read it again.

If you read it differently the second time (adding the second “the”), you just experienced one of the problems with relying on personal inquiry; that is, the tendency to see what we believe. Our assumptions very often guide our perceptions; consequently, when we believe something, we tend to see it even if it is not there. Have you heard the saying, “seeing is believing”? Well, the truth is just the opposite: believing is seeing. This problem may just be a result of cognitive ‘blinders,’ or it may be part of a more conscious attempt to support our own views. Confirmation bias is the tendency to look for evidence that we are right, and in so doing, we ignore contradictory evidence.

Philosopher Karl Popper suggested that the distinction between that which is scientific and that which is unscientific is that science is falsifiable; scientific inquiry involves attempts to reject or refute a theory or set of assumptions (Thornton, 2005). A theory that cannot be falsified is not scientific. And much of what we do in personal inquiry involves drawing conclusions based on what we have personally experienced or validating our own experience by discussing what we think is true with others who

share the same views.

Science offers a more systematic way to make comparisons and guard against bias. One technique used to avoid sampling bias is to select participants for a study in a random way. This means using a technique to ensure that all members have an equal chance of being selected. Simple random sampling may involve using a set of random numbers as a guide in determining who is to be selected. For example, if we have a list of 400 people and wish to randomly select a smaller group or sample to be studied, we use a list of random numbers and select the case that corresponds with that number (Case 39, 3, 217, etc.). This is preferable to asking only those individuals with whom we are familiar to participate in a study; if we conveniently chose only people we know, we know nothing about those who had no opportunity to be selected. There are many more elaborate techniques that can be used to obtain samples that represent the composition of the population we are studying. But even though a randomly selected representative sample is preferable, it is not always used because of costs and other limitations. As a consumer of research, however, you should know how the sample was obtained and keep this in mind when interpreting results. It is possible that what was found was limited to that sample or similar individuals and not generalizable to everyone else.

2.1: The Scientific Method

2.2: Quantitative and Qualitative Approaches to Research

2.3: Descriptive Research

2.4: Methods of Data Collection

2.5: Analyzing Data- Correlational and Experimental Research

2.6: Correlational Research

2.7: Experimental Research

2.8: Developmental Research Designs

2.9: Challenges in Conducting Developmental Research

2.10: Glossary

This page titled 2: Psychological Research is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

2.1: The Scientific Method

The general scientific approach has three fundamental features (Stanovich, 2010). The first is *systematic empiricism*. Empiricism refers to learning based on observation, and scientists learn about the natural world systematically, by carefully planning, making, recording, and analyzing observations of it. The second feature of the scientific approach is that it is concerned with *empirical questions*. These are questions about the way the world actually is and, therefore, can be answered by systematically observing it. The third feature is that it creates *public knowledge*. After asking empirical questions, making observations, and drawing their conclusions, scientists publish their work. This usually means writing an article for publication in a professional journal, in which they put their research question in the context of previous research, describe in detail the methods they used to answer their question, and clearly present their results and conclusions. Publication is an essential feature of science for two reasons. One is that science is a social process—a large-scale collaboration among many researchers distributed across both time and space. Our current scientific knowledge of most topics is based on many different studies conducted by many different researchers who have shared their work with each other over the years. The second is that publication allows science to be self-correcting. Individual scientists understand that despite their best efforts, their methods can be flawed, and their conclusions incorrect. Publication allows others in the scientific community to detect and correct these errors so that, over time, scientific knowledge increasingly reflects the way the world actually is.

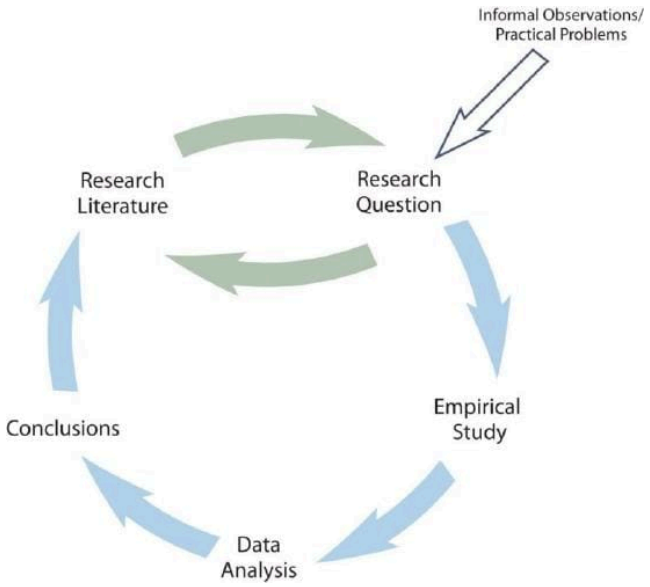


Figure 2.2.1. Simple model of scientific research in psychology.

Figure 2.2.1 is a simple model of scientific research in psychology and presents a more specific model of scientific research in psychology. The researcher (who more often than not is really a small group of researchers) formulates a research question, conducts a study designed to answer the question, analyzes the resulting data, draws conclusions about the answer to the question, and publishes the results so that they become part of the research literature. Because the research literature is one of the primary sources of new research questions, this process can be thought of as a cycle. New research leads to new questions, which leads to new research, and so on. The model also indicates that research questions can originate outside of this cycle, either with informal observations or with practical problems that need to be solved. But even in these cases, the researcher would start by checking the research literature to see if the question had already been answered and to refine it based on what previous research had already found.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 2.2.1. The Scientific Method explains the basic steps taken for most scientific inquiry.

https://assessments.lumenlearning.co...sessments/2695

Candela Citations

CC licensed content, Original

- The Scientific Method. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...ntific-method/. **License**: Public Domain: No Known Copyright

CC licensed content, Shared previously

- Research Methods in Psychology. **Provided by**: University of Minnesota . **Retrieved from**: https://open.lib.umn.edu/psychologyresearchmethods/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Specific attribution

- The Scientific Method. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/N6IAzlugWw0. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

This page titled 2.1: The Scientific Method is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

2.2: Quantitative and Qualitative Approaches to Research



If you think about the vast array of fields and topics covered in psychology, you understand that in order to do psychological research, there must be a diverse set of ways to gather data and perform experiments. For example, a biological psychologist might work predominately in a lab setting or alongside a neurologist. A social scientist may set up situational experiments, a health psychologist may administer surveys, and a developmental psychologist may make observations in a classroom. In this section, you'll learn about the various types of research methods that psychologists employ to learn about human behavior.

When designing a study, typically, researchers choose a quantitative or qualitative research design. In some cases, a mixed-method approach may be appropriate. Which approach used will develop on the research question and the type of information sought. Quantitative methods may be better for understanding what is happening, while qualitative methods may be better for understanding the hows and why of a phenomenon.

Interactive Content

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this Interactive Content online

Quantitative research typically starts with a focused research question or hypothesis, collects a small amount of data from each of a large number of individuals, describes the resulting data using statistical techniques, and draws general conclusions about some large population. The strength of quantitative research is its ability to provide precise answers to specific research questions and to draw general conclusions about human behavior; however, it is not nearly as good at *generating* novel and interesting research questions. Likewise, while quantitative research is good at drawing general conclusions about human behavior, it is not nearly as good at providing detailed descriptions of the behavior of particular groups in particular situations. And it is not very good at all at communicating what it is actually like to be a member of a particular group in a particular situation. But the relative weaknesses of quantitative research are the relative strengths of qualitative research.

Qualitative Research

Although this is by far the most common approach to conducting empirical research in psychology, there is a vital alternative called **qualitative research**. Qualitative research can help researchers to generate new and interesting research questions and hypotheses. Qualitative researchers generally begin with a less focused research question, collect large amounts of relatively "unfiltered" data from a relatively small number of individuals, and describe their data using nonstatistical techniques. They are usually less concerned with drawing general conclusions about human behavior than with understanding in detail the *experience* of their research participants. Qualitative research can also provide rich and detailed descriptions of human behavior in the real-

world contexts in which it occurs. Similarly, qualitative research can convey a sense of what it is actually like to be a member of a particular group or in a particular situation—what qualitative researchers often refer to as the 'lived experience' of the research participants.

Mixed-Methods

Given their differences, it may come as no surprise that quantitative and qualitative research do not coexist in complete harmony. Some quantitative researchers criticize that qualitative methods lack objectivity, are challenging to evaluate, and do not allow generalization to other people or situations. At the same time, some qualitative researchers criticize that quantitative methods overlook the richness of behavior and experience, and instead answer simple questions about easily quantifiable variables. However, many researchers from both camps now agree that the two approaches can and should be combined into what has come to be called mixed-methods research (Todd, Nerlich, McKeown, & Clarke, 2004). One approach to combining quantitative and qualitative research is to use qualitative research for hypothesis generation and quantitative research for hypothesis testing. A second approach to combining quantitative and qualitative research is referred to as triangulation. The idea is to use both quantitative and qualitative methods simultaneously to study the same general questions and to compare the results. If the results of the quantitative and qualitative methods converge on the same general conclusion, they reinforce and enrich each other. If the results diverge, then they suggest an interesting new question: Why do the results diverge, and how can they be reconciled?

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 2.3.2. *What are Qualitative and Quantitative Variables* explains the difference between quantitative and qualitative variables that may be used in research.

https://assessments.lumenlearning.co...essments/16500

Becoming Familiar with Research

An excellent way to become more familiar with these research approaches, both quantitative and qualitative, is to look at journal articles, which are written in sections that follow these steps in the scientific process. Most psychological articles and many papers in the social sciences follow the writing guidelines and format dictated by the American Psychological Association (APA). In general, the structure follows: abstract (summary of the article), introduction or literature review, methods explaining how the study was conducted, results of the study, discussion and interpretation of findings, and references.

The aftermath of teenage suicide: a qualitative study of the psychosocial consequences for the supervising family

Per Lindqvist and his colleagues (2008), wanted to learn how the families of teenage suicide victims cope with their loss. They did not have a specific research question or hypothesis, such as, what percentage of family members join suicide support groups? Instead, they wanted to understand the variety of reactions that families had, with a focus on what it is like from *their* perspectives. To do this, they interviewed the families of 10 teenage suicide victims in their homes in rural Sweden. The interviews were relatively unstructured, beginning with a general request for the families to talk about the victim and ending with an invitation to talk about anything else that they wanted to tell the interviewer. One of the most important themes that emerged from these interviews was that even as life returned to "normal," the families continued to struggle with the question of why their loved one committed suicide. This struggle appeared to be especially difficult for families in

which the suicide was most unexpected. This relationship can now be explored using quantitative research. But it is unclear whether this question would have arisen at all without the researchers sitting down with the families and listening to what they themselves wanted to say about their experience.

Candela Citations

CC licensed content, Original

- Quantitative and Qualitative Approaches to Research. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...s-to-research/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- What are Qualitative and Quantitative Variables. **Provided by**: StraighterLine. **Retrieved from**: https://youtu.be/RJrkR4X0Lrg. **License**: *All Rights Reserved*

CC licensed content, Shared previously

- Research Methods in Psychology. **Provided by**: University of Minnesota . **Retrieved from**: https://open.lib.umn.edu/psychologyresearchmethods/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- Psychology. **Provided by**: Open Stax. **License**: CC BY: Attribution

CC licensed content, Specific attribution

- Types of Research: Qualitative & Quantitative Designs. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://hvcc.techsmithrelay.com/Vu4x. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

This page titled 2.2: Quantitative and Qualitative Approaches to Research is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

2.3: Descriptive Research

There are many research methods available to psychologists in their efforts to understand, describe, and explain behavior. Some methods rely on observational techniques. Other approaches involve interactions between the researcher and the individuals who are being studied—ranging from a series of simple questions to extensive, in-depth interviews—to well-controlled experiments. The main categories of psychological research are descriptive, correlational, and experimental research. Each of these research methods has unique strengths and weaknesses, and each method may only be appropriate for certain types of research questions.

https://assessments.lumenlearning.co...sessments/2706

Research studies that do not test specific relationships between variables are called **descriptive studies**. For this method, the research question or hypothesis can be about a single variable (e.g., How accurate are people's first impressions?) or can be a broad and exploratory question (e.g., What is it like to be a working mother diagnosed with depression?). The variable of the study is measured and reported without any further relationship analysis. A researcher might choose this method if they only needed to report information, such as a tally, an average, or a list of responses. Descriptive research can answer interesting and important questions, but what it cannot do is answer questions about relationships between variables.

Interactive Content

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this Interactive Content online

Video 2.4.1. *Descriptive Research Design* provides explanation and examples for quantitative descriptive research. A closed-captioned version of this video is available here.

Descriptive research is distinct from **correlational research**, in which researchers formally test whether a relationship exists between two or more variables. **Experimental research** goes a step further beyond descriptive and correlational research and randomly assigns people to different conditions, using hypothesis testing to make inferences about causal relationships between variables. We will discuss each of these methods more in-depth later.

Table 2.4.1. Comparison of research design methods

Research design	Goal	Advantages	Disadvantages
Descriptive	To create a snapshot of the current state of affairs	Provides a relatively complete picture of what is occurring at a given time. Allows the development of questions for further study.	Does not assess relationships among variables. May be unethical if participants do not know they are being observed.
Correlational	To assess the relationships between and among two or more variables	Allows testing of expected relationships between and among variables and the making of predictions. Can assess these relationships in everyday life events.	Cannot be used to draw inferences about the causal relationships between and among the variables.
Experimental	To assess the causal impact of one or more experimental manipulations on a dependent variable	Allows drawing of conclusions about the causal relationships among variables.	Cannot experimentally manipulate many important variables. May be expensive and time-consuming.

Source: Stangor, 2011.

Candela Citations

CC licensed content, Original

- Descriptive Research. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...tive-research/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Introduction to Psychology. **Authored by**: Charles Stangor and Jennifer Walinga. **Provided by**: BC Campus Open Education. **Retrieved from**: https://opentextbc.ca/introductiontopsychology/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Specific attribution

- Descriptive Research Design. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://hvcc.techsmithrelay.com/LNvM. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

This page titled 2.3: Descriptive Research is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

2.4: Methods of Data Collection

Regardless of the method of research, data collection will be necessary. The method of data collection selected will primarily depend on the type of information the researcher needs for their study; however, other factors, such as time, resources, and even ethical considerations can influence the selection of a data collection method. All of these factors need to be considered when selecting a data collection method because each method has unique strengths and weaknesses. We will discuss the uses and assessment of the most common data collection methods: observation, surveys, archival data, and tests.

Observation

The observational method involves the watching and recording of a specific behavior of participants. In general, observational studies have the strength of allowing the researcher to see for themselves how people behave. However, observations may require more time and manpower than other data collection methods, often resulting in smaller samples of participants. Researchers may spend significant time waiting to observe a behavior, or the behavior may never occur during observation. It is important to remember that people tend to change their behavior when they know they are being watched (known as the **Hawthorne effect**).

Observations may be done in a naturalist setting to reduce the likelihood of the Hawthorne effect. During naturalistic observations, the participants are in their natural environment and are usually unaware that they are being observed. For example, observing students participating in their class would be a naturalist observation. The downside of a naturalistic setting is that the research doesn't have control over the environment. Imagine that the researcher goes to the classroom to observe those students, and there is a substitute teacher. The change in instructor that day could impact student behavior and skew the data.

If controlling the environment is a concern, a laboratory setting may be a better choice. In the laboratory environment, the researcher can manage confounding factors or distractions that might impact the participants' behavior. Of course, there are expenses associated with maintaining a laboratory setting, increasing the cost of the study, that would not be associated with naturalist observations. And, again, the Hawthorne effect may impact behavior.

https://assessments.lumenlearning.co...sessments/2713

Surveys



Surveys are familiar to most people because they are so widely used. This method enhances accessibility to subjects because they can be conducted in person, over the phone, through the mail, or online, and are commonly used by researchers to gather information on many variables in a relatively short period of time.

Most surveys involve asking a standard set of questions to a group of participants. In a highly structured survey, subjects are forced to choose from a response set such as "strongly disagree, disagree, undecided, agree, strongly agree"; or "0, 1-5, 6-10, etc." One of the benefits of having forced-choice items is that each response is coded so that the results can be quickly entered and analyzed using statistical software. While this type of survey typically yields surface information on a wide variety of factors, it may not allow for an in-depth understanding of human behavior.

Of course, surveys can be designed in a number of ways. Some surveys ask open-ended questions, allowing each participant to devise their own response, allowing for a variety of answers. This variety may provide deeper insight into the subject than forced-choice questions, but makes comparing answers challenging. Imagine a survey question that asked participants to report how they are feeling today. If there were 100 participants, there could be 100 different answers, which is more challenging and takes more time to code and analyze.

Surveys are useful in examining stated values, attitudes, opinions, and reporting on practices. However, they are based on self-report, and this can limit accuracy. For a variety of reasons, people may not provide honest or complete answers. Participants may be concerned with projecting a particular image through their responses, they may be uncomfortable answering the questions, inaccurately assess their behavior, or they may lack awareness of the behavior being assessed. So, while surveys can provide a lot of information for many participants quickly and easily, self-reporting may not be as accurate as other methods.

https://assessments.lumenlearning.co...sessments/2716

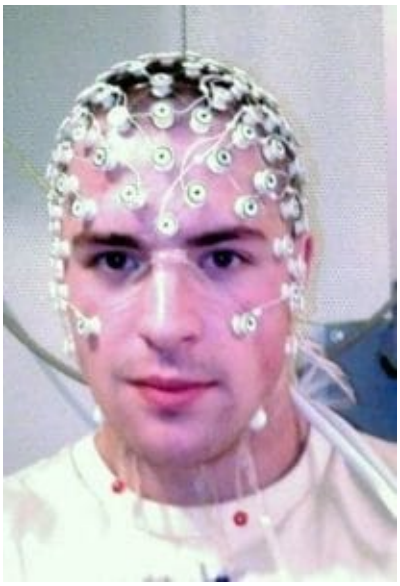
Content Analysis of Archival data

Content analysis involves looking at media such as old texts, pictures, commercials, lyrics, or other materials to explore patterns or themes in culture. An example of content analysis is the classic history of childhood by Aries (1962) called “Centuries of Childhood” or the analysis of television commercials for sexual or violent content or for ageism. Passages in text or television programs can be randomly selected for analysis as well. Again, one advantage of analyzing work such as this is that the researcher does not have to go through the time and expense of finding respondents, but the researcher cannot know how accurately the media reflects the actions and sentiments of the population.

Secondary content analysis, or archival research, involves analyzing information that has already been collected or examining documents or media to uncover attitudes, practices, or preferences. There are a number of data sets available to those who wish to conduct this type of research. The researcher conducting secondary analysis does not have to recruit subjects but does need to know the quality of the information collected in the original study. And unfortunately, the researcher is limited to the questions asked and data collected originally.

https://assessments.lumenlearning.co...sessments/2720

Tests



Many variables studied by psychologists—perhaps the majority—are not so straightforward or simple to measure. These kinds of variables are called constructs and include personality traits, emotional states, attitudes, and abilities. Psychological constructs cannot be observed directly. One reason is that they often represent *tendencies* to think, feel, or act in certain ways. For example, to say that a particular college student is highly extroverted does not necessarily mean that she is behaving in an extroverted way

right now. Another reason psychological constructs cannot be observed directly is that they often involve internal processes, like thoughts or feelings. For these psychological constructs, we need another means of collecting data. Tests will serve this purpose.

A good test will aid researchers in assessing a particular psychological construct. What is a good test? Researchers want a test that is standardized, reliable, and valid. A standardized test is one that is administered, scored, and analyzed in the same way for each participant. This minimizes differences in test scores due to confounding factors, such as variability in the testing environment or scoring process, and assures that scores are comparable. Reliability refers to the consistency of a measure. Researchers consider three types of consistency: over time (test-retest reliability), across items (internal consistency), and across different researchers (interrater reliability). Validity is the extent to which the scores from a measure represent the variable they are intended to. When a measure has good test-retest reliability and internal consistency, researchers should be more confident that the scores represent what they are supposed to.

There are various types of tests used in psychological research. Self-report measures are those in which participants report their own thoughts, feelings, and actions, such as the Rosenberg Self-Esteem Scale or the Big Five Personality Test. Some tests measure performance, ability, aptitude, or skill, like the Stanford-Binet Intelligence Scale or the SATs.There are also tests that measure physiological states, including electrical activity or blood flow in the brain.

Interactive Content

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this Interactive Content online

Video 2.5.1. *Methods of Data Collection* explains various means for gathering data for quantitative and qualitative research. A closed-captioned version of this video is available here.

https://assessments.lumenlearning.co...sessments/2710

Reliability and Validity

Reliability and **validity** are two important considerations that must be made with any type of data collection. Reliability refers to the ability to consistently produce a given result. In the context of psychological research, this would mean that any instruments or tools used to collect data do so in consistent, reproducible ways. Unfortunately, being consistent in measurement does not necessarily mean that you have measured something correctly. To illustrate this concept, consider a kitchen scale that would be used to measure the weight of cereal that you eat in the morning. If the scale is not properly calibrated, it may consistently under- or overestimate the amount of cereal that's being measured. While the scale is highly reliable in producing consistent results (e.g., the same amount of cereal poured onto the scale produces the same reading each time), those results are incorrect. This is where validity comes into play. Validity refers to the extent to which a given instrument or tool accurately measures what it's supposed to measure. While any valid measure is by necessity reliable, the reverse is not necessarily true. Researchers strive to use instruments that are both highly reliable and valid.

h5p

Interactive Content

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this Interactive Content online

Everyday Connection: How Valid Is the SAT?

Standardized tests like the SAT are supposed to measure an individual's aptitude for a college education, but how reliable and valid are such tests? Research conducted by the College Board suggests that scores on the SAT have high predictive validity for first-year college students' GPA (Kobrin, Patterson, Shaw, Mattern, & Barbuti, 2008). In this context, predictive validity refers to the test's ability to effectively predict the GPA of college freshmen. Given that many institutions of higher education require the SAT for admission, this high degree of predictive validity might be comforting.

However, the emphasis placed on SAT scores in college admissions has generated some controversy on a number of fronts. For one, some researchers assert that the SAT is a biased test that places minority students at a disadvantage and unfairly reduces the likelihood of being admitted into a college (Santelices & Wilson, 2010). Additionally, some research has suggested that the predictive validity of the SAT is grossly exaggerated in how well it is able to predict the GPA of first-year college students. In fact, it has been suggested that the SAT's predictive validity may be overestimated by as much as 150% (Rothstein, 2004). Many institutions of higher education are beginning to consider de-emphasizing the significance of SAT scores in making admission decisions (Rimer, 2008).

In 2014, College Board president David Coleman expressed his awareness of these problems, recognizing that college success is more accurately predicted by high school grades than by SAT scores. To address these concerns, he has called for significant changes to the SAT exam (Lewin, 2014).

Candela Citations

CC licensed content, Original

- Methods of Data Collection. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...ta-collection/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Research Methods. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...earch-methods/. **License**: CC BY: Attribution

This page titled 2.4: Methods of Data Collection is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

2.5: Analyzing Data- Correlational and Experimental Research

Did you know that as sales of ice cream increase, so does the overall rate of crime? Is it possible that indulging in your favorite flavor of ice cream could send you on a crime spree? Or, after committing a crime, do you think you might decide to treat yourself to a cone? There is no question that a relationship exists between ice cream and crime (e.g., Harper, 2013), but does one thing actually caused the other to occur.

It is much more likely that both ice cream sales and crime rates are related to the temperature outside. When the temperature is warm, there are lots of people out of their houses, interacting with each other, getting annoyed with one another, and sometimes committing crimes. Also, when it is warm outside, we are more likely to seek a refreshing treat like ice cream. How do we determine if there is indeed a relationship between two things? And when there is a relationship, how can we discern whether it is attributable to coincidence or causation? We do this through statistical analysis of the data. Which analysis we use will depend on several conditions outlined next.

Introduction to Statistical Thinking



Figure 2.6.1. People around the world differ in their preferences for drinking coffee versus drinking tea. Would the results of the coffee study be the same in Canada as in China? [Image: Duncan, https://goo.gl/vbMyTm, CC BY-NC 2.0, https://goo.gl/l8UUGY]

Does drinking coffee actually increase your life expectancy? A recent study (Freedman, Park, Abnet, Hollenbeck, & Sinha, 2012) found that men who drank at least six cups of coffee a day had a 10% lower chance of dying (women 15% lower) than those who drank none. Does this mean you should pick up or increase your own coffee habit? Modern society has become awash in studies such as this; you can read about several such studies in the news every day. Conducting such a study well, and interpreting the results of such studies requires understanding basic ideas of **statistics**, the science of gaining insight from data. Key components to a statistical investigation are:

- Planning the study: Start by asking a testable research question and deciding how to collect data. For example, how long was the study period of the coffee study? How many people were recruited for the study, how were they recruited, and from where? How old were they? What other variables were recorded about the individuals? Were changes made to the participants' coffee habits during the course of the study?
- Examining the data: What are appropriate ways to examine the data? What graphs are relevant, and what do they reveal? What descriptive statistics can be calculated to summarize relevant aspects of the data, and what do they reveal? What patterns do you see in the data? Are there any individual observations that deviate from the overall pattern, and what do they reveal? For example, in the coffee study, did the proportions differ when we compared the smokers to the non-smokers?
- Inferring from the data: What are valid statistical methods for drawing inferences "beyond" the data you collected? In the

coffee study, is the 10%–15% reduction in risk of death something that could have happened just by chance?
- Drawing conclusions: Based on what you learned from your data, what conclusions can you draw? Who do you think these conclusions apply to? (Were the people in the coffee study older? Healthy? Living in cities?) Can you draw a **cause-and-effect** conclusion about your treatments? (Are scientists now saying that the coffee drinking is the cause of the decreased risk of death?)

Notice that the numerical analysis ("crunching numbers" on the computer) comprises only a small part of overall statistical investigation. In this section, you will see how we can answer some of these questions and what questions you should be asking about any statistical investigation you read about.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 2.6.1. *Types of Statistical Studies* explains the differences between correlational and experimental research.

https://assessments.lumenlearning.co...sessments/2708

Distributional Thinking

When data are collected to address a particular question, an important first step is to think of meaningful ways to organize and examine the data. Let's take a look at an example.

Example 1: Researchers investigated whether cancer pamphlets are written at an appropriate level to be read and understood by cancer patients (Short, Moriarty, & Cooley, 1995). Tests of reading ability were given to 63 patients. In addition, readability level was determined for a **sample** of 30 pamphlets, based on characteristics such as the lengths of words and sentences in the pamphlet. The results, reported in terms of grade levels, are displayed in Figure 2.6.2.

Patients' reading levels	< 3	3	4	5	6	7	8	9	10	11	12	> 12	Total
Count (number of patients)	6	4	4	3	3	2	6	5	4	7	2	17	63

Pamphlet's readability levels	6	7	8	9	10	11	12	13	14	15	16	Total
Count (number of pamphlets)	3	3	8	4	1	1	4	2	1	2	1	30

Figure 2.6.2. Frequency tables of patient reading levels and pamphlet readability levels.

Testing these two variables reveal two fundamental aspects of statistical thinking:

- Data *vary*. More specifically, values of a variable (such as reading level of a cancer patient or readability level of a cancer pamphlet) vary.
- Analyzing the pattern of variation, called the **distribution** of the variable, often reveals insights.

Addressing the research question of whether the cancer pamphlets are written at appropriate levels for the cancer patients requires comparing the two distributions. A naïve comparison might focus only on the centers of the distributions. Both medians turn out to be ninth grade, but considering only medians ignores the variability and the overall distributions of these data. A more illuminating approach is to compare the entire distributions, for example with a graph, as in Figure 2.6.3.

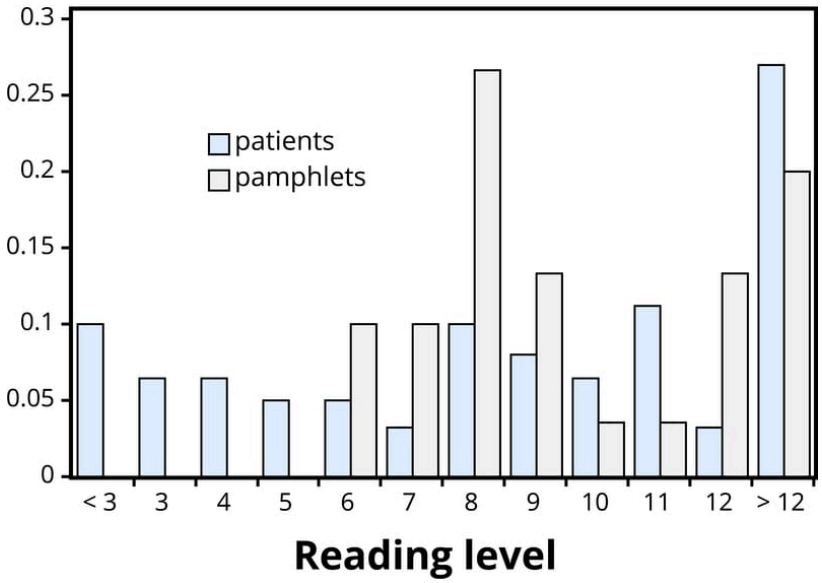


Figure 2.6.3. Comparison of patient reading levels and pamphlet readability levels.

Figure 2.6.3 makes clear that the two distributions are not well aligned at all. The most glaring discrepancy is that many patients (17/63, or 27%, to be precise) have a reading level below that of the most readable pamphlet. These patients will need help to understand the information provided in the cancer pamphlets. Notice that this conclusion follows from considering the distributions as a whole, not simply measures of center or variability, and that the graph contrasts those distributions more immediately than the frequency tables.

https://assessments.lumenlearning.co...sessments/2741

Statistical Significance

Even when we find patterns in data, often there is still uncertainty in various aspects of the data. For example, there may be potential for measurement errors (even your own body temperature can fluctuate by almost 1°F over the course of the day). Or we may only have a "snapshot" of observations from a more long-term process or only a small subset of individuals from the **population** of interest. In such cases, how can we determine whether patterns we see in our small set of data is convincing evidence of a systematic phenomenon in the larger process or population? Let's take a look at another example.

Example 2: In a study reported in the November 2007 issue of *Nature*, researchers investigated whether pre-verbal infants take into account an individual's actions toward others in evaluating that individual as appealing or aversive (Hamlin, Wynn, & Bloom, 2007). In one component of the study, 10-month-old infants were shown a "climber" character (a piece of wood with "googly" eyes glued onto it) that could not make it up a hill in two tries. Then the infants were shown two scenarios for the climber's next try, one where the climber was pushed to the top of the hill by another character ("helper"), and one where the climber was pushed back down the hill by another character ("hinderer"). The infant was alternately shown these two scenarios several times. Then the infant was presented with two pieces of wood (representing the helper and the hinderer characters) and asked to pick one to play with.

The researchers found that of the 16 infants who made a clear choice, 14 chose to play with the helper toy. One possible explanation for this clear majority result is that the helping behavior of the one toy increases the infants' likelihood of choosing that toy. But are there other possible explanations? What about the color of the toy? Well, prior to collecting the data, the researchers arranged so that each color and shape (red square and blue circle) would be seen by the same number of infants. Or maybe the infants had right-handed tendencies and so picked whichever toy was closer to their right hand?

Well, prior to collecting the data, the researchers arranged it so half the infants saw the helper toy on the right and half on the left. Or, maybe the shapes of these wooden characters (square, triangle, circle) had an effect? Perhaps, but again, the researchers controlled for this by rotating which shape was the helper toy, the hinderer toy, and the climber. When designing experiments, it is important to *control* for as many variables as might affect the responses as possible. It is beginning to appear that the researchers accounted for all the other plausible explanations. But there is one more important consideration that cannot be

controlled—if we did the study again with these 16 infants, they might not make the same choices. In other words, there is some *randomness* inherent in their selection process.

P-value

Maybe each infant had no genuine preference at all, and it was simply "random luck" that led to 14 infants picking the helper toy. Although this random component cannot be controlled, we can apply a *probability model* to investigate the pattern of results that would occur in the long run if random chance were the only factor.

If the infants were equally likely to pick between the two toys, then each infant had a 50% chance of picking the helper toy. It's like each infant tossed a coin, and if it landed heads, the infant picked the helper toy. So if we tossed a coin 16 times, could it land heads 14 times? Sure, it's possible, but it turns out to be very unlikely. Getting 14 (or more) heads in 16 tosses is about as likely as tossing a coin and getting 9 heads in a row. This probability is referred to as a **p-value**. The p-value represents the likelihood that experimental results happened by chance. Within psychology, the most common standard for p-values is "$p < .05$". What this means is that there is less than a 5% probability that the results happened just by random chance, and therefore a 95% probability that the results reflect a meaningful pattern in human psychology. We call this **statistical significance**.

https://assessments.lumenlearning.co...sessments/2743

So, in the study above, if we assume that each infant was choosing equally, then the probability that 14 or more out of 16 infants would choose the helper toy is found to be 0.0021. We have only two logical possibilities: either the infants have a genuine preference for the helper toy, or the infants have no preference (50/50), and an outcome that would occur only 2 times in 1,000 iterations happened in this study. Because this p-value of 0.0021 is quite small, we conclude that the study provides very strong evidence that these infants have a genuine preference for the helper toy.

If we compare the p-value to some cut-off value, like 0.05, we see that the p=value is smaller. Because the p-value is smaller than that cut-off value, then we reject the hypothesis that only random chance was at play here. In this case, these researchers would conclude that *significantly* more than half of the infants in the study chose the helper toy, giving strong evidence of a genuine preference for the toy with the helping behavior.

https://assessments.lumenlearning.co...sessments/2742

Generalizability



Figure 2.6.4. Generalizability is an important research consideration: The results of studies with widely representative samples are more likely to generalize to the population. [Image: Barnacles Budget Accommodation]

One limitation to the study mentioned previously about the babies choosing the "helper" toy is that the conclusion only applies to the 16 infants in the study. We don't know much about how those 16 infants were selected. Suppose we want to select a subset of individuals (a **sample**) from a much larger group of individuals (the **population**) in such a way that conclusions from the sample can be **generalized** to the larger population. This is the question faced by pollsters every day.

Example 3: The General Social Survey (GSS) is a survey on societal trends conducted every other year in the United States. Based

on a sample of about 2,000 adult Americans, researchers make claims about what percentage of the U.S. population consider themselves to be "liberal," what percentage consider themselves "happy," what percentage feel "rushed" in their daily lives, and many other issues. The key to making these claims about the larger population of all American adults lies in how the sample is selected. The goal is to select a sample that is representative of the population, and a common way to achieve this goal is to select a **random sample** that gives every member of the population an equal chance of being selected for the sample. In its simplest form, random sampling involves numbering every member of the population and then using a computer to randomly select the subset to be surveyed. Most polls don't operate exactly like this, but they do use probability-based sampling methods to select individuals from nationally representative panels.

https://assessments.lumenlearning.co...sessments/2747

In 2004, the GSS reported that 817 of 977 respondents (or 83.6%) indicated that they always or sometimes feel rushed. This is a clear majority, but we again need to consider variation due to *random sampling*. Fortunately, we can use the same probability model we did in the previous example to investigate the probable size of this error. (Note, we can use the coin-tossing model when the actual population size is much, much larger than the sample size, as then we can still consider the probability to be the same for every individual in the sample.) This probability model predicts that the sample result will be within 3 percentage points of the population value (roughly 1 over the square root of the sample size, the **margin of error**). A statistician would conclude, with 95% confidence, that between 80.6% and 86.6% of all adult Americans in 2004 would have responded that they sometimes or always feel rushed.

https://assessments.lumenlearning.co...sessments/2748

The key to the margin of error is that when we use a probability sampling method, we can make claims about how often (in the long run, with repeated random sampling) the sample result would fall within a certain distance from the unknown population value by chance (meaning by random sampling variation) alone. Conversely, non-random samples are often suspect to bias, meaning the sampling method systematically over-represents some segments of the population and under-represents others. We also still need to consider other sources of bias, such as individuals not responding honestly. These sources of error are not measured by the margin of error.

Cause and Effect Conclusions

In many research studies, the primary question of interest concerns differences between groups. Then the question becomes how were the groups formed (e.g., selecting people who already drink coffee vs. those who don't). In some studies, the researchers actively form the groups themselves. But then we have a similar question—could any differences we observe in the groups be an artifact of that group-formation process? Or maybe the difference we observe in the groups is so large that we can discount a "fluke" in the group-formation process as a reasonable explanation for what we find?

Example 4: A psychology study investigated whether people tend to display more creativity when they are thinking about intrinsic (internal) or extrinsic (external) motivations (Ramsey & Schafer, 2002, based on a study by Amabile, 1985). The subjects were 47 people with extensive experience with creative writing. Subjects began by answering survey questions about either intrinsic motivations for writing (such as the pleasure of self-expression) or extrinsic motivations (such as public recognition). Then all subjects were instructed to write a haiku, and those poems were evaluated for creativity by a panel of judges. The researchers conjectured beforehand that subjects who were thinking about intrinsic motivations would display more creativity than subjects who were thinking about extrinsic motivations. The creativity scores from the 47 subjects in this study are displayed in Figure 2.6.5, where higher scores indicate more creativity.

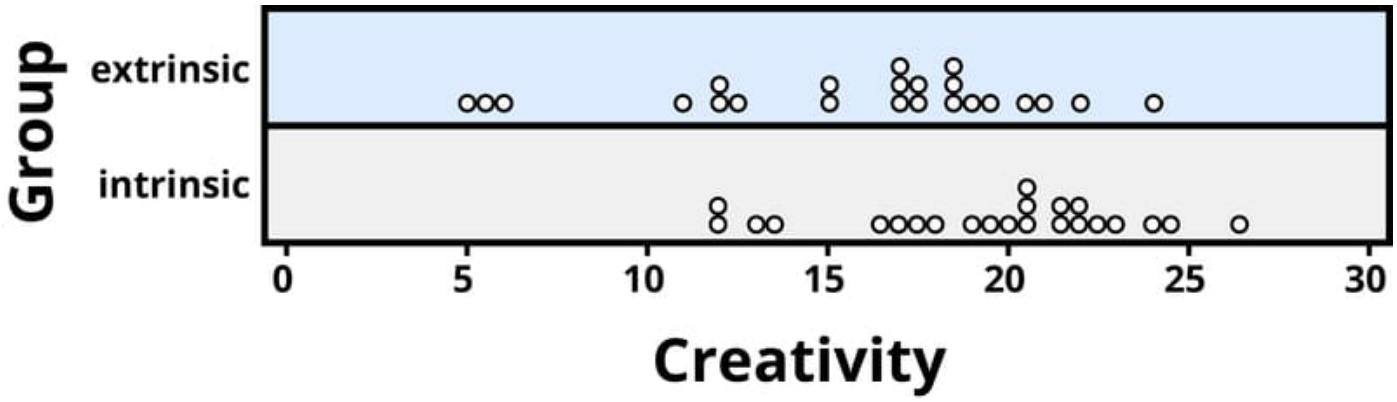


Figure 2.6.5. Creativity scores separated by type of motivation.

In this example, the key question is whether the type of motivation *affects* creativity scores. In particular, do subjects who were asked about intrinsic motivations tend to have higher creativity scores than subjects who were asked about extrinsic motivations?

Figure 2.6.5 reveals that both motivation groups saw considerable variability in creativity scores, and these scores have considerable overlap between the groups. In other words, it's certainly not always the case that those with extrinsic motivations have higher creativity than those with intrinsic motivations, but there may still be a statistical *tendency* in this direction. (Psychologist Keith Stanovich (2013) refers to people's difficulties with thinking about such probabilistic tendencies as "the Achilles heel of human cognition.")

The mean creativity score is 19.88 for the intrinsic group, compared to 15.74 for the extrinsic group, which supports the researchers' conjecture. Yet comparing only the means of the two groups fails to consider the variability of creativity scores in the groups. We can measure variability with statistics using, for instance, the standard deviation: 5.25 for the extrinsic group and 4.40 for the intrinsic group. The standard deviations tell us that most of the creativity scores are within about 5 points of the mean score in each group. We see that the mean score for the intrinsic group lies within one standard deviation of the mean score for extrinsic group. So, although there is a tendency for the creativity scores to be higher in the intrinsic group, on average, the difference is not extremely large.

We again want to consider possible explanations for this difference. The study only involved individuals with extensive creative writing experience. Although this limits the population to which we can generalize, it does not explain why the mean creativity score was a bit larger for the intrinsic group than for the extrinsic group. Maybe women tend to receive higher creativity scores? Here is where we need to focus on how the individuals were assigned to the motivation groups. If only women were in the intrinsic motivation group and only men in the extrinsic group, then this would present a problem because we wouldn't know if the intrinsic group did better because of the different type of motivation or because they were women. However, the researchers guarded against such a problem by randomly assigning the individuals to the motivation groups. Like flipping a coin, each individual was just as likely to be assigned to either type of motivation. Why is this helpful? Because this **random assignment** tends to balance out all the variables related to creativity we can think of, and even those we don't think of in advance, between the two groups. So we should have a similar male/female split between the two groups; we should have a similar age distribution between the two groups; we should have a similar distribution of educational background between the two groups; and so on. Random assignment should produce groups that are as similar as possible except for the type of motivation, which presumably eliminates all those other variables as possible explanations for the observed tendency for higher scores in the intrinsic group.

But does this always work? No, so by "luck of the draw" the groups may be a little different prior to answering the motivation survey. So then the question is, is it possible that an unlucky random assignment is responsible for the observed difference in creativity scores between the groups? In other words, suppose each individual's poem was going to get the same creativity score no matter which group they were assigned to, that the type of motivation in no way impacted their score. Then how often would the random-assignment process alone lead to a difference in mean creativity scores as large (or larger) than 19.88 – 15.74 = 4.14 points?

We again want to apply to a probability model to approximate a **p-value**, but this time the model will be a bit different. Think of writing everyone's creativity scores on an index card, shuffling up the index cards, and then dealing out 23 to the extrinsic motivation group and 24 to the intrinsic motivation group, and finding the difference in the group means. We (better yet, the computer) can repeat this process over and over to see how often, when the scores don't change, random assignment leads to a difference in means at least as large as 4.41. Figure 2.6.6 shows the results from 1,000 such hypothetical random assignments

for these scores.

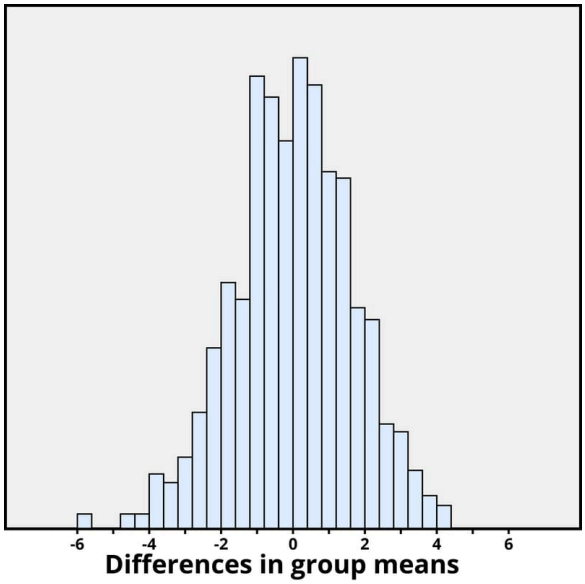


Figure 2.6.6. Differences in group means under random assignment alone.

Only 2 of the 1,000 simulated random assignments produced a difference in group means of 4.41 or larger. In other words, the approximate p-value is 2/1000 = 0.002. This small p-value indicates that it would be very surprising for the random assignment process alone to produce such a large difference in group means. Therefore, as with Example 4, we have strong evidence that focusing on intrinsic motivations tends to increase creativity scores, as compared to thinking about extrinsic motivations.

Notice that the previous statement implies a cause-and-effect relationship between motivation and creativity score; is such a strong conclusion justified? Yes, because of the random assignment used in the study. That should have balanced out any other variables between the two groups, so now that the small p-value convinces us that the higher mean in the intrinsic group wasn't just a coincidence, the only reasonable explanation left is the difference in the type of motivation. Can we generalize this conclusion to everyone? Not necessarily—we could cautiously generalize this conclusion to individuals with extensive experience in creative writing similar to the individuals in this study, but we would still want to know more about how these individuals were selected to participate.

https://assessments.lumenlearning.co...sessments/2709

Conclusion



Figure 2.6.7. Researchers employ the scientific method that involves a great deal of statistical thinking: generate a hypothesis –> design a study to test that hypothesis –> conduct the study –> analyze the data –> report the results. [Image: widdowquinn]

Statistical thinking involves the careful design of a study to collect meaningful data to answer a focused research question, detailed analysis of patterns in the data, and drawing conclusions that go beyond the observed data. Random sampling is paramount to generalizing results from our sample to a larger population, and random assignment is key to drawing cause-and-effect conclusions. With both kinds of randomness, probability models help us assess how much random variation we can expect in our results, in order to determine whether our results could happen by chance alone and to estimate a margin of error.

So where does this leave us with regard to the coffee study mentioned previously (the Freedman, Park, Abnet, Hollenbeck, & Sinha, 2012 found that men who drank at least six cups of coffee a day had a 10% lower chance of dying (women 15% lower) than those who drank none)? We can answer many of the questions:

- This was a 14-year study conducted by researchers at the National Cancer Institute.
- The results were published in the June issue of the *New England Journal of Medicine*, a respected, peer-reviewed journal.
- The study reviewed coffee habits of more than 402,000 people ages 50 to 71 from six states and two metropolitan areas. Those with cancer, heart disease, and stroke were excluded at the start of the study. Coffee consumption was assessed once at the start of the study.
- About 52,000 people died during the course of the study.
- People who drank between two and five cups of coffee daily showed a lower risk as well, but the amount of reduction increased for those drinking six or more cups.
- The sample sizes were fairly large and so the p-values are quite small, even though percent reduction in risk was not extremely large (dropping from a 12% chance to about 10%–11%).
- Whether coffee was caffeinated or decaffeinated did not appear to affect the results.
- This was an observational study, so no cause-and-effect conclusions can be drawn between coffee drinking and increased longevity, contrary to the impression conveyed by many news headlines about this study. In particular, it's possible that those with chronic diseases don't tend to drink coffee.

This study needs to be reviewed in the larger context of similar studies and consistency of results across studies, with the constant caution that this was not a randomized experiment. Whereas a statistical analysis can still "adjust" for other potential confounding variables, we are not yet convinced that researchers have identified them all or completely isolated why this decrease in death risk is evident. Researchers can now take the findings of this study and develop more focused studies that address new questions.

Learn More

Explore these outside resources to learn more about applied statistics:

- Video about p-values: P-Value Extravaganza
- Interactive web applets for teaching and learning statistics
- Inter-university Consortium for Political and Social Research where you can find and analyze data.
- The Consortium for the Advancement of Undergraduate Statistics

Candela Citations

CC licensed content, Original

- Analyzing Data: Correlational and Experimental Research. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...ntal-research/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Psychology. **Provided by**: OpenStax. **Retrieved from**: https://openstax.org/details/books/psychology. **License**: CC BY: Attribution

CC licensed content, Specific attribution

- Types of Statistical Studies. **Authored by**: Sal Khan. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/z-Qi4w6Xkuc. **License**: CC BY-NC-ND: Attribution-NonCommercial-NoDerivatives

This page titled 2.5: Analyzing Data- Correlational and Experimental Research is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

2.6: Correlational Research

Correlation means that there is a relationship between two or more variables (such as ice cream consumption and crime), but this relationship does not necessarily imply cause and effect. When two variables are correlated, it simply means that as one variable changes, so does the other. We can measure correlation by calculating a statistic known as a correlation coefficient. A **correlation coefficient** is a number from -1 to +1 that indicates the strength and direction of the relationship between variables. The correlation coefficient is usually represented by the letter *r*.

The number portion of the correlation coefficient indicates the strength of the relationship. The closer the number is to 1 (be it negative or positive), the more strongly related the variables are, and the more predictable changes in one variable will be as the other variable changes. The closer the number is to zero, the weaker the relationship and the less predictable the relationship between the variables becomes. For instance, a correlation coefficient of 0.9 indicates a far stronger relationship than a correlation coefficient of 0.3. If the variables are not related to one another at all, the correlation coefficient is 0. The example above about ice cream and crime is an example of two variables that we might expect to have no relationship to each other.

https://assessments.lumenlearning.co...essments/16503

The sign—positive or negative—of the correlation coefficient indicates the direction of the relationship (Figure 2.7.1). A **positive correlation** means that the variables move in the same direction. Put another way, it means that as one variable increases so does the other, and conversely, when one variable decreases so does the other. A **negative correlation** means that the variables move in opposite directions. If two variables are negatively correlated, a decrease in one variable is associated with an increase in the other and vice versa.

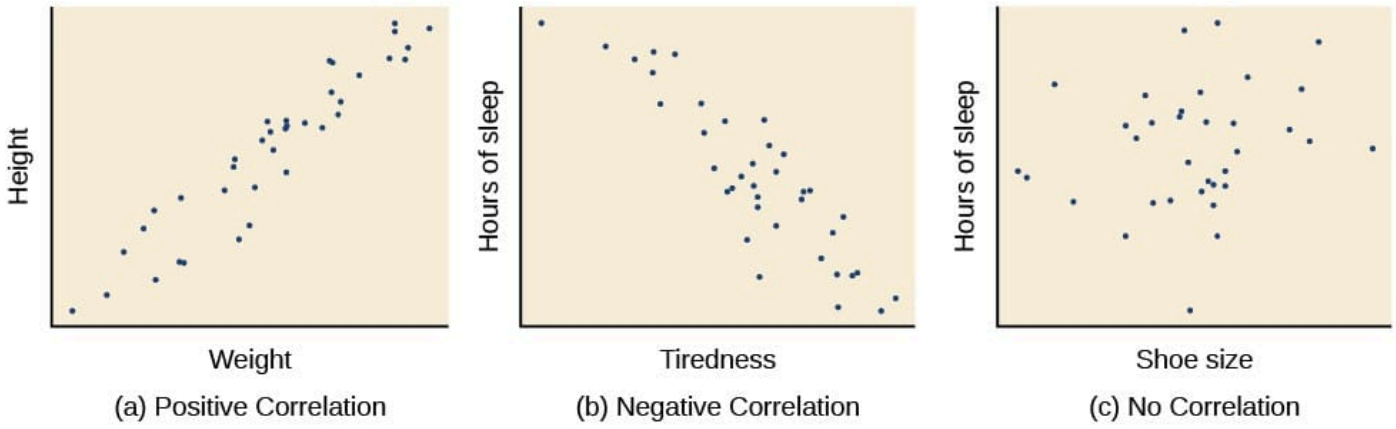


Figure 2.7.1. Scatterplots are a graphical view of the strength and direction of correlations. The stronger the correlation, the closer the data points are to a straight line. In these examples, we see that there is (a) a positive correlation between weight and height, (b) a negative correlation between tiredness and hours of sleep, and (c) no correlation between shoe size and hours of sleep.

The example of ice cream and crime rates is a positive correlation because both variables increase when temperatures are warmer. Other examples of positive correlations are the relationship between an individual's height and weight or the relationship between a person's age and number of wrinkles. One might expect a negative correlation to exist between someone's tiredness during the day and the number of hours they slept the previous night: the amount of sleep decreases as the feelings of tiredness increase. In a real-world example of negative correlation, student researchers at the University of Minnesota found a weak negative correlation (r = -0.29) between the average number of days per week that students got fewer than 5 hours of sleep and their GPA (Lowry, Dean, & Manders, 2010). Keep in mind that a negative correlation is not the same as no correlation. For example, we would probably find no correlation between hours of sleep and shoe size.

Interactive Content

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this Interactive Content online

Video 2.7.1. Correlational Research Design provides explanation and examples for correlational research. A closed-captioned version of this video is available here.

Exercise

Manipulate this interactive scatterplot to practice your understanding of positive and negative correlations.

https://assessments.lumenlearning.co...sessments/2725

As mentioned earlier, correlations have predictive value. Imagine that you are on the admissions committee of a major university. You are faced with a massive number of applications, but you are able to accommodate only a small percentage of the applicant pool. How might you decide who should be admitted? You might try to correlate your current students' college GPA with their scores on standardized tests like the SAT or ACT. By observing which correlations were strongest for your current students, you could use this information to predict the relative success of those students who have applied for admission into the university.

Correlation Does Not Indicate Causation

Correlational research is useful because it allows us to discover the strength and direction of relationships that exist between two variables. However, correlation is limited because establishing the existence of a relationship tells us little about **cause and effect**. While variables are sometimes correlated because one does cause the other, it could also be that some other factor, a **confounding variable**, is actually causing the systematic movement in our variables of interest. In the ice cream/crime rate example mentioned earlier, temperature is a confounding variable that could account for the relationship between the two variables.

Even when we cannot point to clear confounding variables, we should not assume that a correlation between two variables implies that one variable causes changes in another. This can be frustrating when a cause-and-effect relationship seems clear and intuitive. Think back to our discussion of the research done by the American Cancer Society and how their research projects were some of the first demonstrations of the link between smoking and cancer. It seems reasonable to assume that smoking causes cancer, but if we were limited to correlational research, we would be overstepping our bounds by making this assumption.

Unfortunately, people mistakenly make claims of causation as a function of correlations all the time. Such claims are especially common in advertisements and news stories. For example, recent research found that people who eat cereal on a regular basis achieve healthier weights than those who rarely eat cereal (Frantzen, Treviño, Echon, Garcia-Dominic, & DiMarco, 2013; Barton et al., 2005). Guess how the cereal companies report this finding. Does eating cereal really cause an individual to maintain a healthy weight, or are there other possible explanations, such as, someone at a healthy weight is more likely to regularly eat a healthy breakfast than someone who is obese or someone who avoids meals in an attempt to diet? While correlational research is invaluable in identifying relationships among variables, a significant limitation is the inability to establish causality. Psychologists want to make statements about cause and effect, but the only way to do that is to conduct an experiment to answer a research question. The next section describes how scientific experiments incorporate methods that eliminate or control for alternative explanations, which allow researchers to explore how changes in one variable cause changes in another variable.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 2.7.2. *Correlation and Causality* provides explanation for why correlation does not imply causality.

https://assessments.lumenlearning.co...sessments/2730

Illusory Correlations

The temptation to make erroneous cause-and-effect statements based on correlational research is not the only way we tend to misinterpret data. We also tend to make the mistake of illusory correlations, especially with unsystematic observations. **Illusory correlations**, or false correlations, occur when people believe that relationships exist between two things when no such relationship exists. One well-known illusory correlation is the supposed effect that the moon's phases have on human behavior. Many people passionately assert that human behavior is affected by the phase of the moon, and specifically, that people act strangely when the moon is full (Figure 2).



Figure 2. Many people believe that a full moon makes people behave oddly. (credit: Cory Zanker)

There is no denying that the moon exerts a powerful influence on our planet. The ebb and flow of the ocean's tides are tightly tied to the gravitational forces of the moon. Many people believe, therefore, that it is logical that we are affected by the moon as well. After all, our bodies are largely made up of water. A meta-analysis of nearly 40 studies consistently demonstrated, however, that the relationship between the moon and our behavior does not exist (Rotton & Kelly, 1985). While we may pay more attention to odd behavior during the full phase of the moon, the rates of odd behavior remain constant throughout the lunar cycle. Why are we so apt to believe in illusory correlations like this? Often we read or hear about them and simply accept the information as valid. Or, we have a hunch about how something works and then look for evidence to support that hunch, ignoring evidence that would tell us our hunch is false; this is known as **confirmation bias**. Other times, we find illusory correlations based on the information that comes most easily to mind, even if that information is severely limited. And while we may feel confident that we can use these relationships to better understand and predict the world around us, illusory correlations can have significant drawbacks. For example, research suggests that illusory correlations—in which certain behaviors are inaccurately attributed to certain groups—are involved in the formation of prejudicial attitudes that can ultimately lead to discriminatory behavior (Fiedler, 2004).

Candela Citations

CC licensed content, Original

- Correlational Research. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...onal-research/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Psychology. **Provided by**: OpenStax. **Retrieved from**: https://openstax.org/details/books/psychology. **License**: CC BY: Attribution

CC licensed content, Specific attribution

- Correlation and Causation. **Authored by**: Sal Khan. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/ROpbdO-gRUo. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- Correlational Research Design. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://hvcc.techsmithrelay.com/d0WN. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

This page titled 2.6: Correlational Research is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

2.7: Experimental Research

As you've learned, the only way to establish that there is a cause-and-effect relationship between two variables is to conduct a scientific experiment. Experiment has a different meaning in the scientific context than in everyday life. In everyday conversation, we often use it to describe trying something for the first time, such as experimenting with a new hairstyle or new food. However, in the scientific context, an experiment has precise requirements for design and implementation.

Interactive Content

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this Interactive Content online

Video 2.8.1. Experimental Research Design provides explanation and examples for correlational research. A closed-captioned version of this video is available here.

The Experimental Hypothesis

In order to conduct an experiment, a researcher must have a specific hypothesis to be tested. As you've learned, hypotheses can be formulated either through direct observation of the real world or after careful review of previous research. For example, if you think that children should not be allowed to watch violent programming on television because doing so would cause them to behave more violently, then you have basically formulated a hypothesis—namely, that watching violent television programs causes children to behave more violently. How might you have arrived at this particular hypothesis? You may have younger relatives who watch cartoons featuring characters using martial arts to save the world from evildoers, with an impressive array of punching, kicking, and defensive postures. You notice that after watching these programs for a while, your young relatives mimic the fighting behavior of the characters portrayed in the cartoon. Seeing behavior like this right after a child watches violent television programming might lead you to hypothesize that viewing violent television programming leads to an increase in the display of violent behaviors. These sorts of personal observations are what often lead us to formulate a specific hypothesis, but we cannot use limited personal observations and anecdotal evidence to test our hypothesis rigorously. Instead, to find out if real-world data supports our hypothesis, we have to conduct an experiment.

Designing an Experiment

The most basic experimental design involves two groups: the experimental group and the control group. The two groups are designed to be the same except for one difference— experimental manipulation. The **experimental group** gets the experimental manipulation—that is, the treatment or variable being tested (in this case, violent TV images)—and the **control group** does not. Since experimental manipulation is the only difference between the experimental and control groups, we can be sure that any differences between the two are due to experimental manipulation rather than chance.

In our example of how violent television programming might affect violent behavior in children, we have the experimental group view violent television programming for a specified time and then measure their violent behavior. We measure the violent behavior in our control group after they watch nonviolent television programming for the same amount of time. It is important for the control group to be treated similarly to the experimental group, with the exception that the control group does not receive the experimental manipulation. Therefore, we have the control group watch non-violent television programming for the same amount of time as the experimental group.

We also need to define precisely, or operationalize, what is considered violent and nonviolent. An **operational definition** is a description of how we will measure our variables, and it is important in allowing others to understand exactly how and what a researcher measures in a particular experiment. In operationalizing violent behavior, we might choose to count only physical acts

like kicking or punching as instances of this behavior, or we also may choose to include angry verbal exchanges. Whatever we determine, it is important that we operationalize violent behavior in such a way that anyone who hears about our study for the first time knows exactly what we mean by violence. This aids peoples' ability to interpret our data as well as their capacity to repeat our experiment should they choose to do so.

Once we have operationalized what is considered violent television programming and what is considered violent behavior from our experiment participants, we need to establish how we will run our experiment. In this case, we might have participants watch a 30-minute television program (either violent or nonviolent, depending on their group membership) before sending them out to a playground for an hour where their behavior is observed and the number and type of violent acts are recorded.

https://assessments.lumenlearning.co...sessments/2732

Ideally, the people who observe and record the children's behavior are unaware of who was assigned to the experimental or control group, in order to control for experimenter bias. **Experimenter bias** refers to the possibility that a researcher's expectations might skew the results of the study. Remember, conducting an experiment requires a lot of planning, and the people involved in the research project have a vested interest in supporting their hypotheses. If the observers knew which child was in which group, it might influence how much attention they paid to each child's behavior as well as how they interpreted that behavior. By being blind to which child is in which group, we protect against those biases. This situation is a **single-blind study**, meaning that the participants are unaware as to which group they are in (experiment or control group) while the researcher knows which participants are in each group.

In a **double-blind study**, both the researchers and the participants are blind to group assignments. Why would a researcher want to run a study where no one knows who is in which group? Because by doing so, we can control for both experimenter and participant expectations. If you are familiar with the phrase **placebo effect**, you already have some idea as to why this is an important consideration. The placebo effect occurs when people's expectations or beliefs influence or determine their experience in a given situation. In other words, simply expecting something to happen can actually make it happen.



The placebo effect is commonly described in terms of testing the effectiveness of a new medication. Imagine that you work in a pharmaceutical company, and you think you have a new drug that is effective in treating depression. To demonstrate that your medication is effective, you run an experiment with two groups: The experimental group receives the medication, and the control group does not. But you don't want participants to know whether they received the drug or not.

Why is that? Imagine that you are a participant in this study, and you have just taken a pill that you think will improve your mood. Because you expect the pill to have an effect, you might feel better simply because you took the pill and not because of any drug actually contained in the pill—this is the placebo effect.

To make sure that any effects on mood are due to the drug and not due to expectations, the control group receives a placebo (in this case, a sugar pill). Now everyone gets a pill, and once again, neither the researcher nor the experimental participants know who got the drug and who got the sugar pill. Any differences in mood between the experimental and control groups can now be attributed to the drug itself rather than to experimenter bias or participant expectations.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 2.8.2. Introduction to Experimental Design introduces fundamental elements for experimental research design.

https://assessments.lumenlearning.co...sessments/2731

Independent and Dependent Variables

In a research experiment, we strive to study whether changes in one thing cause changes in another. To achieve this, we must pay attention to two important variables, or things that can be changed, in any experimental study: the independent variable and the dependent variable. An **independent variable** is manipulated or controlled by the experimenter. In a well-designed experimental study, the independent variable is the only important difference between the experimental and control groups. In our example of how violent television programs affect children's display of violent behavior, the independent variable is the type of program—violent or nonviolent—viewed by participants in the study (Figure 2.3). A **dependent variable** is what the researcher measures to see how much effect the independent variable had. In our example, the dependent variable is the number of violent acts displayed by the experimental participants.

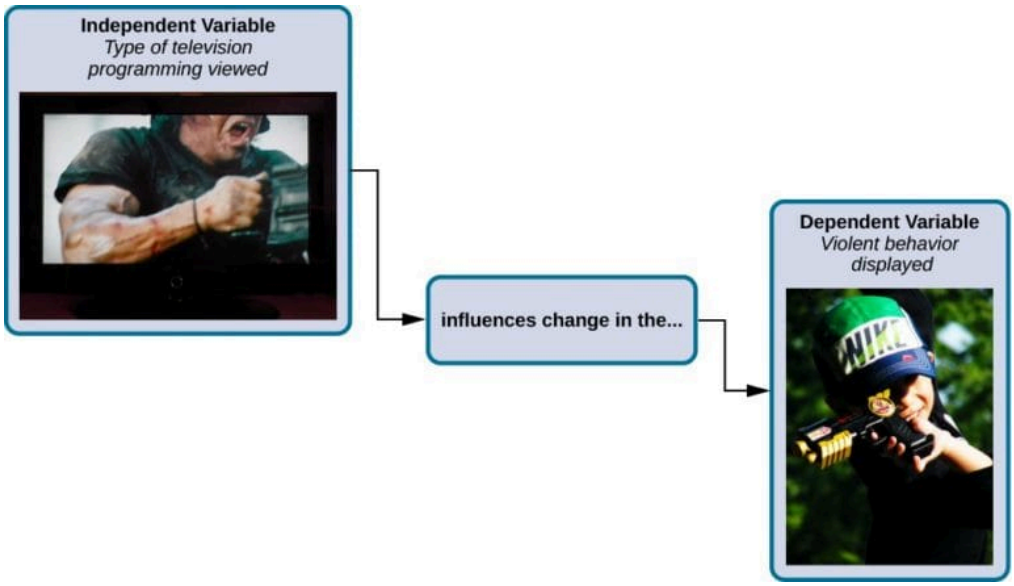


Figure 2.8.1. In an experiment, manipulations of the independent variable are expected to result in changes in the dependent variable.

We expect that the dependent variable will change as a function of the independent variable. In other words, the dependent variable *depends* on the independent variable. A good way to think about the relationship between the independent and dependent variables is with this question: What effect does the independent variable have on the dependent variable? Returning to our example, what effect does watching a half-hour of violent television programming or nonviolent television programming have on the number of incidents of physical aggression displayed on the playground?

https://assessments.lumenlearning.co...sessments/2734

Selecting and Assigning Experimental Participants

Now that our study is designed, we need to obtain a sample of individuals to include in our experiment. Our study involves human participants, so we need to determine who to include. **Participants** are the subjects of psychological research, and as the name implies, individuals who are involved in psychological research actively participate in the process. Often, psychological research projects rely on college students to serve as participants. In fact, the vast majority of research in psychology subfields has historically involved students as research participants (Sears, 1986; Arnett, 2008). But are college students truly representative of the general population? College students tend to be younger, more educated, more liberal, and less diverse than the general population. Although using students as test subjects is an accepted practice, relying on such a limited pool of research participants can be problematic because it is difficult to generalize findings to the larger population.

Our hypothetical experiment involves children, and we must first generate a sample of child participants. Samples are used because populations are usually too large to reasonably involve every member in our particular experiment (Figure 2.4). If possible, we should use a random sample (there are other types of samples, but for the purposes of this chapter, we will focus on random samples). A **random sample** is a subset of a larger population in which every member of the population has an equal chance of being selected. Random samples are preferred because if the sample is large enough we can be reasonably sure that the participating individuals are representative of the larger population. This means that the percentages of characteristics in the sample—sex, ethnicity, socioeconomic level, and any other characteristics that might affect the results—are close to those percentages in the larger population.

In our example, let's say we decide our population of interest is fourth graders. But all fourth graders is a very large population, so we need to be more specific; instead, we might say our population of interest is all fourth graders in a particular city. We should include students from various income brackets, family situations, races, ethnicities, religions, and geographic areas of town. With this more manageable population, we can work with the local schools in selecting a random sample of around 200 fourth-graders that we want to participate in our experiment.

In summary, because we cannot test all of the fourth graders in a city, we want to find a group of about 200 that reflects the composition of that city. With a representative group, we can generalize our findings to the larger population without fear of our sample being biased in some way.

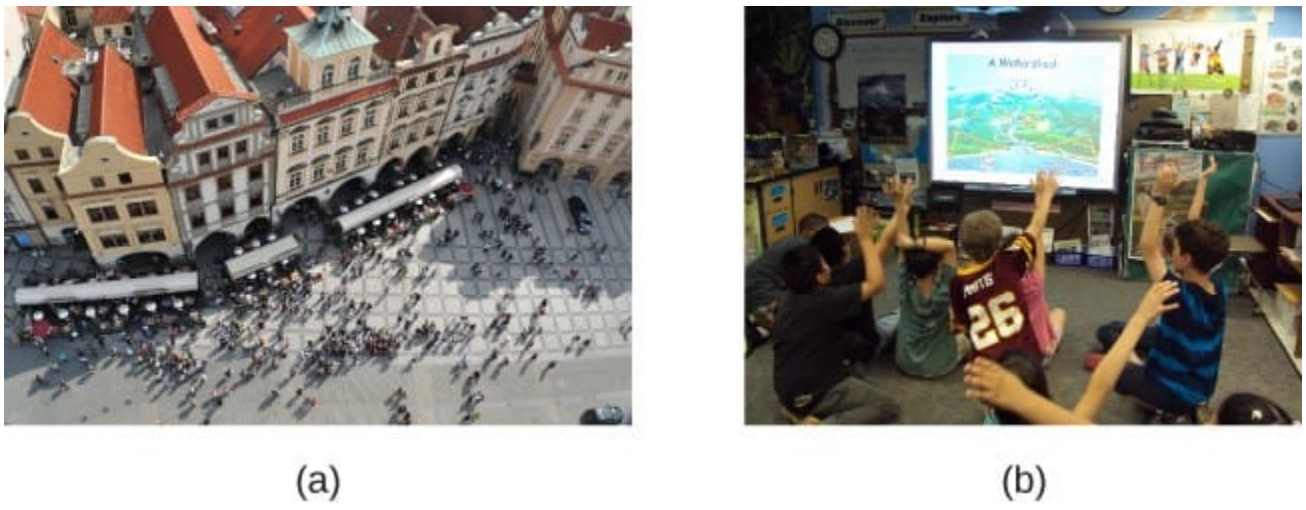


Figure 2.8.2. Researchers may work with (a) a large population or (b) a sample group that is a subset of the larger population.

Now that we have a sample, the next step of the experimental process is to split the participants into experimental and control groups through random assignment. With **random assignment**, all participants have an equal chance of being assigned to either group. There is statistical software that will randomly assign each of the fourth graders in the sample to either the experimental or the control group.

Random assignment is critical for sound experimental design. With sufficiently large samples, random assignment makes it unlikely that there are systematic differences between the groups. So, for instance, it would be improbable that we would get one group composed entirely of males, a given ethnic identity, or a given religious ideology. This is important because if the groups were systematically different before the experiment began, we would not know the origin of any differences we find between the

groups: Were the differences preexisting, or were they caused by manipulation of the independent variable? Random assignment allows us to assume that any differences observed between experimental and control groups result from the manipulation of the independent variable.

Exercise

Use this online tool to generate randomized numbers instantly and to learn more about random sampling and assignments.

Issues to Consider

While experiments allow scientists to make cause-and-effect claims, they are not without problems. True experiments require the experimenter to manipulate an independent variable, and that can complicate many questions that psychologists might want to address. For instance, imagine that you want to know what effect sex (the independent variable) has on spatial memory (the dependent variable). Although you can certainly look for differences between males and females on a task that taps into spatial memory, you cannot directly control a person's sex. We categorize this type of research approach as quasi-experimental and recognize that we cannot make cause-and-effect claims in these circumstances.

Experimenters are also limited by ethical constraints. For instance, you would not be able to conduct an experiment designed to determine if experiencing abuse as a child leads to lower levels of self-esteem among adults. To conduct such an experiment, you would need to randomly assign some experimental participants to a group that receives abuse, and that experiment would be unethical.

Interpreting Experimental Findings

Once data is collected from both the experimental and the control groups, a **statistical analysis** is conducted to find out if there are meaningful differences between the two groups. The statistical analysis determines how likely any difference found is due to chance (and thus not meaningful). In psychology, group differences are considered meaningful, or significant, if the odds that these differences occurred by chance alone are 5 percent or less. Stated another way, if we repeated this experiment 100 times, we would expect to find the same results at least 95 times out of 100.

The greatest strength of experiments is the ability to assert that any significant differences in the findings are caused by the independent variable. This occurs because random selection, random assignment, and a design that limits the effects of both experimenter bias and participant expectancy should create groups that are similar in composition and treatment. Therefore, any difference between the groups is attributable to the independent variable, and now we can finally make a causal statement. If we find that watching a violent television program results in more violent behavior than watching a nonviolent program, we can safely say that watching violent television programs causes an increase in the display of violent behavior.

https://assessments.lumenlearning.com/assessments/2736

https://assessments.lumenlearning.co...sessments/2731

Candela Citations

CC licensed content, Original

- Experimental Research. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...ntal-research/. **License**: *CC BY-NC-SA: Attribution-NonCommercial-ShareAlike*

CC licensed content, Shared previously

- Psychology. **Provided by**: OpenStax. **Retrieved from**: https://openstax.org/details/books/psychology. **License**: *CC BY: Attribution*

CC licensed content, Specific attribution

- Introduction to Experimental Design. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/ceWyayKg3QY. **License**: *CC BY-NC-SA: Attribution-NonCommercial-ShareAlike*
- Experimental Research Design. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://hvcc.techsmithrelay.com/0xPJ. **License**: *CC BY-NC-SA: Attribution-NonCommercial-ShareAlike*

This page titled 2.7: Experimental Research is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

2.8: Developmental Research Designs

Sometimes, especially in developmental research, the researcher is interested in examining changes over time and will need to consider a research design that will capture these changes. Remember, *research methods* are tools that are used to collect information, while r**esearch design** is the strategy or blueprint for deciding how to collect and analyze information. Research design dictates which methods are used and how. There are three types of developmental research designs: cross-sectional, longitudinal, and sequential.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 2.9.1. Developmental Research Design summarizes the benefits of challenges of the three developmental design models.

Cross-Sectional Designs

The majority of developmental studies use cross-sectional designs because they are less time-consuming and less expensive than other developmental designs. **Cross-sectional research** designs are used to examine behavior in participants of different ages who are tested at the same point in time. Let's suppose that researchers are interested in the relationship between intelligence and aging. They might have a hypothesis that intelligence declines as people get older. The researchers might choose to give a particular intelligence test to individuals who are 20 years old, individuals who are 50 years old, and individuals who are 80 years old at the same time and compare the data from each age group. This research is cross-sectional in design because the researchers plan to examine the intelligence scores of individuals of different ages within the same study at the same time; they are taking a "cross-section" of people at one point in time. Let's say that the comparisons find that the 80-year-old adults score lower on the intelligence test than the 50-year-old adults, and the 50-year-old adults score lower on the intelligence test than the 20-year-old adults. Based on these data, the researchers might conclude that individuals become less intelligent as they get older. Would that be a valid (accurate) interpretation of the results?

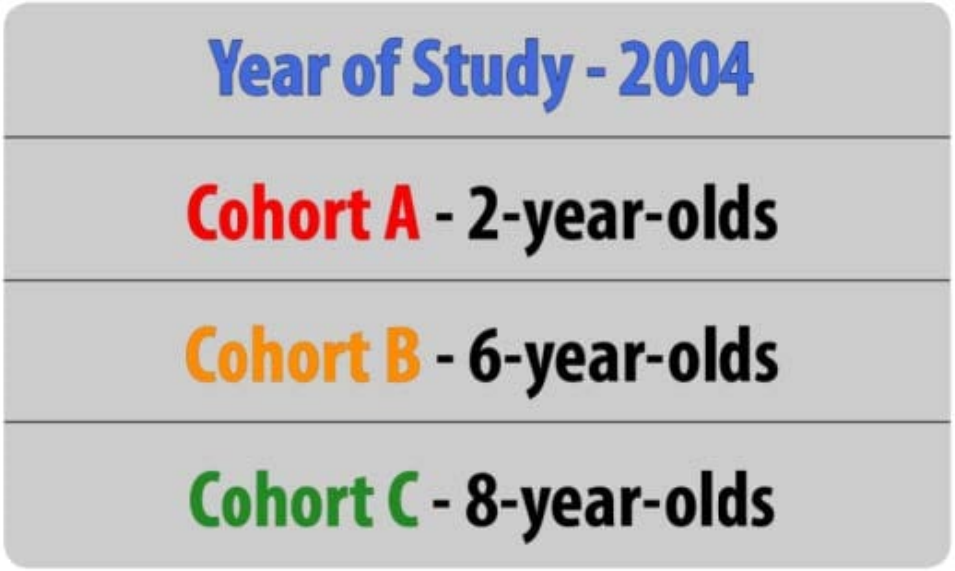


Figure 2.9.1. Example of cross-sectional research design

No, that would not be a valid conclusion because the researchers did not follow individuals as they aged from 20 to 50 to 80 years old. One of the primary limitations of cross-sectional research is that the results yield information about age *differences* not necessarily *changes* over time. That is, although the study described above can show that the 80-year-olds scored lower on the intelligence test than the 50-year-olds, and the 50-year-olds scored lower than the 20-year-olds, the data used for this conclusion were collected from different individuals (or groups). It could be, for instance, that when these 20-year-olds get older, they will still score just as high on the intelligence test as they did at age 20. Similarly, maybe the 80-year-olds would have scored relatively low on the intelligence test when they were young; the researchers don't know for certain because they did not follow the same individuals as they got older.

With each cohort being members of a different generation, it is also possible that the differences found between the groups are not due to age, per se, but due to cohort effects. Differences between these cohorts' IQ results could be due to differences in life experiences specific to their generation, such as differences in education, economic conditions, advances in technology, or changes in health and nutrition standards, and not due to age-related changes.

Another disadvantage of cross-sectional research is that it is limited to one time of measurement. Data are collected at one point in time, and it's possible that something could have happened in that year in history that affected all of the participants, although possibly each cohort may have been affected differently.

https://assessments.lumenlearning.com/assessments/16509

Longitudinal Research Designs



Longitudinal research involves beginning with a group of people who may be of the same age and background (cohort) and measuring them repeatedly over a long period of time. One of the benefits of this type of research is that people can be followed through time and be compared with themselves when they were younger; therefore, changes with age over time are measured. What would be the advantages and disadvantages of longitudinal research? Problems with this type of research include being expensive, taking a long time, and subjects dropping out over time.

Longitudinal research designs are used to examine behavior in the same individuals over time. For instance, with our example of studying intelligence and aging, a researcher might conduct a longitudinal study to examine whether 20-year-olds become less intelligent with age over time. To this end, a researcher might give an intelligence test to individuals when they are 20 years old, again when they are 50 years old, and then again when they are 80 years old. This study is longitudinal in nature because the researcher plans to study the same individuals as they age. Based on these data, the pattern of intelligence and age might look different than from the cross-sectional research; it might be found that participants' intelligence scores are higher at age 50 than at age 20 and then remain stable or decline a little by age 80. How can that be when cross-sectional research revealed declines in intelligence with age?



Figure 2.9.2. Example of a longitudinal research design

Since longitudinal research happens over a period of time (which could be short term, as in months, but is often longer, as in years), there is a risk of attrition. **Attrition** occurs when participants fail to complete all portions of a study. Participants may move, change their phone numbers, die, or simply become disinterested in participating over time. Researchers should account for the possibility of attrition by enrolling a larger sample into their study initially, as some participants will likely drop out over time. There is also something known as **selective attrition—**this means that certain groups of individuals may tend to drop out. It is often the least healthy, least educated, and lower socioeconomic participants who tend to drop out over time. That means that the remaining participants may no longer be representative of the whole population, as they are, in general, healthier, better educated, and have more money. This could be a factor in why our hypothetical research found a more optimistic picture of intelligence and aging as the years went by. What can researchers do about selective attrition? At each time of testing, they could randomly recruit more participants from the same cohort as the original members to replace those who have dropped out.

https://assessments.lumenlearning.co...sessments/2719

The results from longitudinal studies may also be impacted by repeated assessments. Consider how well you would do on a math test if you were given the exact same exam every day for a week. Your performance would likely improve over time, not necessarily because you developed better math abilities, but because you were continuously practicing the same math problems. This phenomenon is known as a practice effect. Practice effects occur when participants become better at a task over time because they have done it again and again (not due to natural psychological development). So our participants may have become familiar with the intelligence test each time (and with the computerized testing administration).

Another limitation of longitudinal research is that the data are limited to only one cohort. As an example, think about how comfortable the participants in the 2010 cohort of 20-year-olds are with computers. Since only one cohort is being studied, there is no way to know if findings would be different from other cohorts. In addition, changes that are found as individuals age over time could be due to age or to time of measurement effects. That is, the participants are tested at different periods in history, so the variables of age and time of measurement could be confounded (mixed up). For example, what if there is a major shift in workplace training and education between 2020 and 2040, and many of the participants experience a lot more formal education in adulthood, which positively impacts their intelligence scores in 2040? Researchers wouldn't know if the intelligence scores increased due to growing older or due to a more educated workforce over time between measurements.

Sequential Research Designs

Sequential research designs include elements of both longitudinal and cross-sectional research designs. Similar to longitudinal designs, sequential research features participants who are followed over time; similar to cross-sectional designs, sequential research includes participants of different ages. This research design is also distinct from those that have been discussed previously in that individuals of different ages are enrolled into a study at various points in time to examine age-related changes, development within the same individuals as they age, and to account for the possibility of cohort and/or time of measurement effects

Consider, once again, our example of intelligence and aging. In a study with a sequential design, a researcher might recruit three separate groups of participants (Groups A, B, and C). Group A would be recruited when they are 20 years old in 2010 and would be tested again when they are 50 and 80 years old in 2040 and 2070, respectively (similar in design to the longitudinal study described previously). Group B would be recruited when they are 20 years old in 2040 and would be tested again when they are 50 years old in 2070. Group C would be recruited when they are 20 years old in 2070, and so on.

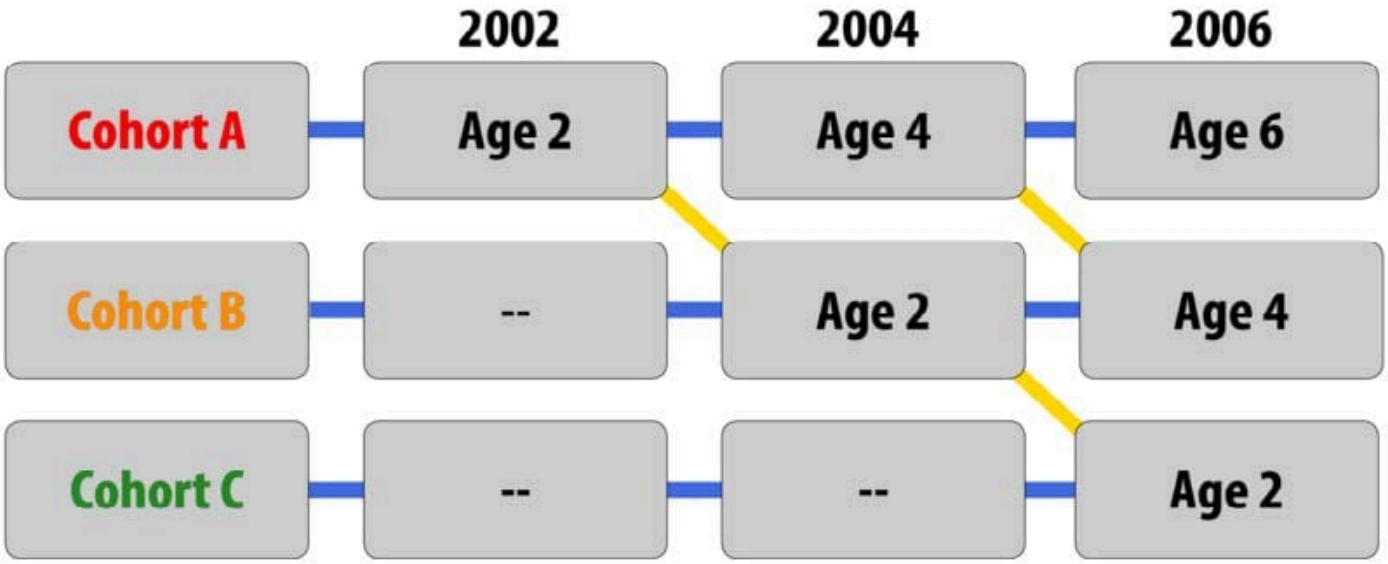


Figure 2.9.3. Example of sequential research design

Studies with sequential designs are powerful because they allow for both longitudinal and cross-sectional comparisons—changes and/or stability with age over time can be measured and compared with differences between age and cohort groups. This research design also allows for the examination of cohort and time of measurement effects. For example, the researcher could examine the intelligence scores of 20-year-olds at different times in history and different cohorts (follow the yellow diagonal lines in figure 3). This might be examined by researchers who are interested in sociocultural and historical changes (because we know that lifespan development is multidisciplinary). One way of looking at the usefulness of the various developmental research designs was described by Schaie and Baltes (1975): cross-sectional and longitudinal designs might reveal change patterns while sequential designs might identify developmental origins for the observed change patterns.

Since they include elements of longitudinal and cross-sectional designs, sequential research has many of the same strengths and limitations as these other approaches. For example, sequential work may require less time and effort than longitudinal research (if data are collected more frequently than over the 30-year spans in our example) but more time and effort than cross-sectional research. Although practice effects may be an issue if participants are asked to complete the same tasks or assessments over time, attrition may be less problematic than what is commonly experienced in longitudinal research since participants may not have to remain involved in the study for such a long period of time.

Comparing Developmental Research Designs

When considering the best research design to use in their research, scientists think about their main research question and the best way to come up with an answer. A table of advantages and disadvantages for each of the described research designs is provided here to help you as you consider what sorts of studies would be best conducted using each of these different approaches.

Table 2.9.1. Advantages and disadvantages of different research designs

	Advantages	Disadvantages
Cross-Sectional	• Examines changes between participants of different ages at the same point in time • Provides information on age differences	• Cannot examine change over time • Limited to one time in history • Cohort differences confounded with age differences

	Advantages	Disadvantages
Longitudinal	• Examines changes within individuals over time • Provides a developmental analysis	• Expensive • Takes a long time • Participant attrition • Possibility of practice effects • Limited to one cohort • Time in history effects confounded with age changes
Sequential	• Examines changes within individuals over time • Examines changes between participants of different ages at the same point in time • Can be used to examine cohort effects • Can be used to examine time in history effects	• May be expensive • May take a long time • Possibility of practice effects • Some participant attrition

https://assessments.lumenlearning.co...sessments/2718

Candela Citations

CC licensed content, Original

- Developmental Research Design. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...search-design/. **License**: CC BY-SA: Attribution-ShareAlike

CC licensed content, Shared previously

- Developmental Research Design. **Authored by**: Margaret Clark-Plaskie . **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...earch-designs/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

This page titled 2.8: Developmental Research Designs is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

2.9: Challenges in Conducting Developmental Research

The previous sections describe research tools to assess development across the lifespan, as well as the ways that research designs can be used to track age-related changes and development over time. Before you begin conducting developmental research, however, you must also be aware that testing individuals of certain ages (such as infants and children) or making comparisons across ages (such as children compared to teens) comes with its own unique set of challenges. In the final section of this module, let's look at some of the main issues that are encountered when conducting developmental research, namely ethical concerns, recruitment issues, and participant attrition.

Ethical Concerns

As a student of the social sciences, you may already know that **Institutional Review Boards (IRBs)** must review and approve all research projects that are conducted at universities, hospitals, and other institutions (each broad discipline or field, such as psychology or social work, often has its own code of ethics that must also be followed, regardless of institutional affiliation). An IRB is typically a panel of experts who read and evaluate proposals for research. IRB members want to ensure that the proposed research will be carried out ethically and that the potential benefits of the research outweigh the risks and potential harm (psychological as well as physical harm) for participants.

What you may not know though, is that the IRB considers some groups of participants to be more vulnerable or at-risk than others. Whereas university students are generally not viewed as vulnerable or at-risk, infants and young children commonly fall into this category. What makes infants and young children more vulnerable during research than young adults? One reason infants and young children are perceived as being at increased risk is due to their limited cognitive capabilities, which makes them unable to state their willingness to participate in research or tell researchers when they would like to drop out of a study. For these reasons, infants and young children require special accommodations as they participate in the research process. Similar issues and accommodations would apply to adults who are deemed to be of limited cognitive capabilities.

When thinking about special accommodations in developmental research, consider the **informed consent** process. If you have ever participated in scientific research, you may know through your own experience that adults commonly sign an informed consent statement (a contract stating that they agree to participate in research) after learning about a study. As part of this process, participants are informed of the procedures to be used in the research, along with any expected risks or benefits. Infants and young children cannot verbally indicate their willingness to participate, much less understand the balance of potential risks and benefits. As such, researchers are oftentimes required to obtain written informed consent from the parent or legal guardian of the child participant, an adult who is almost always present as the study is conducted. In fact, children are not asked to indicate whether they would like to be involved in a study at all (a process known as assent) until they are approximately seven years old. Because infants and young children cannot easily indicate if they would like to discontinue their participation in a study, researchers must be sensitive to changes in the state of the participant (determining whether a child is too tired or upset to continue) as well as to parent desires (in some cases, parents might want to discontinue their involvement in the research). As in adult studies, researchers must always strive to protect the rights and well-being of the minor participants and their parents when conducting developmental research.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 2.10.1. How IRBs Protect Human Research Participants explains the purpose of IRBs in assuring the health and safety of participants in research.

Recruitment

An additional challenge in developmental science is participant recruitment. Recruiting university students to participate in adult studies is typically easy. Many colleges and universities offer extra credit for participation in research and have locations such as bulletin boards and school newspapers where research can be advertised. Unfortunately, young children cannot be recruited by making announcements in Introduction to Psychology courses, by posting ads on campuses, or through online platforms such as Amazon Mechanical Turk. Given these limitations, how do researchers go about finding infants and young children to be in their studies?

The answer to this question varies along multiple dimensions. Researchers must consider the number of participants they need and the financial resources available to them, among other things. Location may also be an important consideration. Researchers who need large numbers of infants and children may attempt to recruit them by obtaining infant birth records from the state, county, or province in which they reside. Some areas make this information publicly available for free, whereas birth records must be purchased in other areas (and in some locations birth records may be entirely unavailable as a recruitment tool). If birth records are available, researchers can use the obtained information to call families by phone or mail them letters describing possible research opportunities. All is not lost if this recruitment strategy is unavailable, however. Researchers can choose to pay a recruitment agency to contact and recruit families for them. Although these methods tend to be quick and effective, they can also be quite expensive. More economical recruitment options include posting advertisements and fliers in locations frequented by families, such as mommy-and-me classes, local malls, and preschools or daycare centers. Researchers can also utilize online social media outlets like Facebook, which allows users to post recruitment advertisements for a small fee. Of course, each of these different recruitment techniques requires IRB approval. And if children are recruited and/or tested in school settings, permission would need to be obtained ahead of time from teachers, schools, and school districts (as well as informed consent from parents or guardians).

And what about the recruitment of adults? While it is easy to recruit young college students to participate in research, some would argue that it is too easy and that college students are samples of convenience. They are not randomly selected from the wider population, and they may not represent all young adults in our society (this was particularly true in the past with certain cohorts, as college students tended to be mainly white males of high socioeconomic status). In fact, in the early research on aging, this type of convenience sample was compared with another type of convenience sample—young college students tended to be compared with residents of nursing homes! Fortunately, it didn't take long for researchers to realize that older adults in nursing homes are not representative of the older population; they tend to be the oldest and sickest (physically and/or psychologically). Those initial studies probably painted an overly negative view of aging, as young adults in college were being compared to older adults who were not healthy, had not been in school nor taken tests in many decades, and probably did not graduate high school, let alone college. As we can see, recruitment and random sampling can be significant issues in research with adults, as well as infants and children. For instance, how and where would you recruit middle-aged adults to participate in your research?

Attrition



Another important consideration when conducting research with infants and young children is **attrition**. Although attrition is quite common in longitudinal research in particular (see the previous section on longitudinal designs for an example of high attrition rates and selective attrition in lifespan developmental research), it is also problematic in developmental science more generally, as studies with infants and young children tend to have higher attrition rates than studies with adults. For example, high attrition rates in ERP (event-related potential, which is a technique to understand brain function) studies oftentimes result from the demands of the task: infants are required to sit still and have a tight, wet cap placed on their heads before watching still photographs on a computer screen in a dark, quiet room. In other cases, attrition may be due to motivation (or a lack thereof). Whereas adults may be motivated to participate in research in order to receive money or extra course credit, infants and young children are not as easily enticed. In addition, infants and young children are more likely to tire easily, become fussy, and lose interest in the study procedures than are adults. For these reasons, research studies should be designed to be as short as possible – it is likely better to break up a large study into multiple short sessions rather than cram all of the tasks into one long visit to the lab. Researchers should also allow time for breaks in their study protocols so that infants can rest or have snacks as needed. Happy, comfortable participants provide the best data.

Conclusions

Lifespan development is a fascinating field of study – but care must be taken to ensure that researchers use appropriate methods to examine human behavior, use the correct experimental design to answer their questions, and be aware of the special challenges that are part-and-parcel of developmental research. After reading this module, you should have a solid understanding of these various issues and be ready to think more critically about research questions that interest you. For example, what types of questions do you have about lifespan development? What types of research would you like to conduct? Many interesting questions remain to be examined by future generations of developmental scientists – maybe you will make one of the next big discoveries!

https://assessments.lumenlearning.co...essments/16510

Candela Citations

CC licensed content, Shared previously

- Research in Lifespan Development. **Authored by**: Lumen. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/su...n-development/. **License**: CC BY: Attribution

This page titled 2.9: Challenges in Conducting Developmental Research is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

attrition: reduction in the number of research participants as some drop out over time

case study: exploring a single case or situation in great detail. Information may be gathered with the use of observation, interviews, testing, or other methods to uncover as much as possible about a person or situation

cohort: a group of people who are born at roughly the same period in a particular society. Cohorts share histories and contexts for living

content analysis: involves looking at media such as old texts, pictures, commercials, lyrics or other materials to explore patterns or themes in culture

control group: a comparison group that is equivalent to the experimental group, but is not given the independent variable

correlation: the relationship between two or more variables; when two variables are correlated, one variable changes as the other does

correlation coefficient: number from -1 to +1, indicating the strength and direction of the relationship between variables, and usually represented by r

correlational research: research that formally tests whether a relationship exists between two or more variables, however, correlation does not imply causation

cross-sectional research: used to examine behavior in participants of different ages who are tested at the same point in time; may confound age and cohort differences

dependent variable: the outcome or variable that is supposedly affected by the independent variable

descriptive studies: research focused on describing an occurrence

double-blind: a research design in which neither the participants nor the researchers know whether an individual is assigned to the experimental group or the control group

experimental group: the group of participants in an experiment who receive the independent variable

experimental research: research that involves randomly assigning people to different conditions and using hypothesis testing to make inferences about how these conditions affect behavior; the only method that measures cause and effect between variables

experiments: designed to test hypotheses in a controlled setting in efforts to explain how certain factors or events produce outcomes; the only research method that measures cause and effect relationships between variables

explanatory studies: research that tries to answer the question “why”

Hawthorne effect: individuals tend to change their behavior when they know they are being watched

hypotheses: specific statements or predictions about the relationship between variables

independent variable: something that is manipulated or introduced by the researcher to the experimental group; treatment or intervention

longitudinal research: studying a group of people who may be of the same age and background (cohort), and measuring them repeatedly over a long period of time; may confound age and time of measurement effects

negative correlation: two variables change in different directions, with one becoming larger as the other becomes smaller; a negative correlation is not the same thing as no correlation

observational studies: also called naturalistic observation, involves watching and recording the actions of participants

operationalized: concepts transformed into variables that can be measured in research

positive correlation: two variables change in the same direction, both becoming either larger or smaller

qualitative research: theoretical ideas are “grounded” in the experiences of the participants, who answer open-ended questions

quantitative research: involves numerical data that are quantified using statistics to understand and report what has been studied

reliability: when something yields consistent results

research design: the strategy or blueprint for deciding how to collect and analyze information; dictates which methods are used and how

scatterplot: a plot or mathematical diagram consisting of data points that represent two variables

secondary content analysis: archival research, involves analyzing information that has already been collected or examining documents or media to uncover attitudes, practices or preferences

selective attrition: certain groups of individuals may tend to drop out more frequently resulting in the remaining participants longer being representative of the whole population

sequential research design: combines aspects of cross-sectional and longitudinal designs, but also adding new cohorts at different times of measurement; allows for analyses to consider effects of age, cohort, time of measurement, and socio-historical change

survey: asking a standard set of questions to a group of subjects

validity: when something yields accurate results

variables: factors that change in value

This page titled 2.10: Glossary is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

3: PSYCHOLOGICAL APPROACHES

Learning Objectives

- Describe theories as they relate to lifespan development
- Describe the historical foundations leading to the development of theories about lifespan development
- Describe Freud's theory of psychosexual development
- Describe Erikson's eight stages of psychosocial development
- Describe the principles of classical conditioning
- Describe the principles of operant conditioning
- Describe social learning theory
- Describe Piaget's theory of cognitive development
- Describe information processing approaches to cognitive development
- Describe the major concepts of humanistic theory (unconditional positive regard, the good life), as developed by Carl Rogers
- Explain Maslow's hierarchy of needs
- Describe Vygotsky's sociocultural theory of cognitive development
- Explain Bronfenbrenner's bioecological model
- Describe the evolutionary perspective
- Contrast the main psychological theories that apply to human development



Attitudes towards children and adolescents have evolved. Before the 17th century, children were generally considered weaker, more insignificant versions of adults. They were assumed to be subject to the same needs and desires as adults and to have the same vices and virtues as adults. Therefore they dressed the same, were not warranted more privileges, and they worked the same hours and received the same punishments for misdeeds. If they stole, they were hanged. If they worked hard and did well, they could achieve prosperity. Children were considered adults as soon as they could live alone.

Society, and especially psychologists, now reject this medieval view; but how do we go about formulating contemporary theories of development? Our personal theories about development are based on experiences, folklore, stories in the media, or built haphazardly on unverified observation. However, the theories presented in this course are more formal. They are based on prior empirical evidence and observations by psychologists and other researchers and provide a framework through which we can draw conclusions and make predictions about human behavior. These theories are subject to rigorous testing through research and are based on a psychological approach. A **psychological approach** is a perspective, based on certain assumptions, about behavior. Each approach holds shared ideas about how to describe, predict, and explain behavior.

In this chapter, we will discuss the major psychological approaches that pertain to development. But first, we will briefly review some of the early founders of the field of developmental psychology. We will then examine the major characteristics of the contemporary approaches: psychodynamic, behavioral, humanistic, cognitive, contextual, biological, and evolutionary psychology.

3.1: Understanding Theories

3.2: History of Developmental Psychology

3.3: Contemporary Psychological Approaches

3.4: Psychodynamic Approach

3.5: Behavioral Approach

3.6: Humanistic Approach

3.7: Cognitive Approach

3.8: Contextual Approach

3.9: Biopsychology and Evolutionary Psychology

3.10: Comparing Contemporary Approaches

3.11: Glossary

This page titled 3: Psychological Approaches is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

3.1: Understanding Theories

Scientific knowledge is advanced through a process known as the scientific method. Basically, ideas (in the form of theories and hypotheses) are tested against the real world (in the form of empirical observations), and those empirical observations lead to more ideas that are tested against the real world, and so on. In this sense, the scientific process is circular. The types of reasoning within the circle are called deductive and inductive. In **deductive reasoning**, ideas are tested against the empirical world; in **inductive reasoning**, empirical observations lead to new ideas (Figure 2.4). These processes are inseparable, like inhaling and exhaling, but different research approaches place different emphasis on the deductive and inductive aspects.

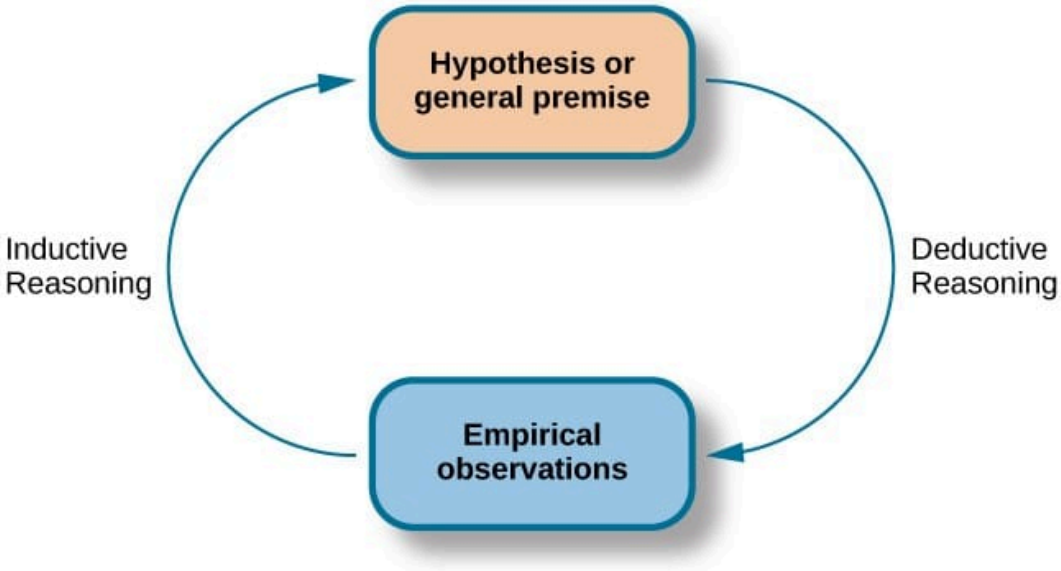


Figure 3.2.1. Psychological research relies on both inductive and deductive reasoning.

In the scientific context, deductive reasoning begins with a generalization—one hypothesis—that is then used to reach logical conclusions about the real world. If the hypothesis is correct, then the logical conclusions reached through deductive reasoning should also be correct. A deductive reasoning argument might go something like this: All living things require energy to survive (this would be your hypothesis). Ducks are living things. Therefore, ducks require energy to survive (logical conclusion). In this example, the hypothesis is correct; therefore, the conclusion is correct as well. Sometimes, however, an incorrect hypothesis may lead to a logical but incorrect conclusion. Consider this argument: all ducks are born with the ability to see. Quackers is a duck. Therefore, Quackers was born with the ability to see. Scientists use deductive reasoning to test their hypotheses empirically. Returning to the example of the ducks, researchers might design a study to test the hypothesis that if all living things require energy to survive, then ducks will be found to require energy to survive.

Deductive reasoning starts with a generalization that is tested against real-world observations; however, inductive reasoning moves in the opposite direction. Inductive reasoning uses empirical observations to construct broad generalizations. Unlike deductive reasoning, conclusions drawn from inductive reasoning may or may not be correct, regardless of the observations on which they are based. For instance, you may notice that your favorite fruits—apples, bananas, and oranges—all grow on trees; therefore, you assume that all fruit must grow on trees. This would be an example of inductive reasoning, and the existence of strawberries, blueberries, and kiwi demonstrate that this generalization is not correct despite it being based on several direct observations. Scientists use inductive reasoning to formulate theories, which in turn generate hypotheses that are tested with deductive reasoning. In the end, science involves both deductive and inductive processes.

For example, case studies are heavily weighted on the side of empirical observations. Thus, case studies are closely associated with inductive processes as researchers gather massive amounts of observations and seek interesting patterns (new ideas) in the data. Experimental research, on the other hand, puts great emphasis on deductive reasoning.

What is a Theory?

We have stated that theories and hypotheses are ideas, but what sort of ideas are they, exactly? A **theory** is a well-developed set of ideas that propose an explanation for observed phenomena. Theories are repeatedly checked against the world, but they tend to be too complex to be tested all at once; instead, researchers create hypotheses to test specific aspects of a theory.

A **hypothesis** is a testable prediction about how the world will behave if our idea is correct, and it is often worded as an if-then statement (e.g., if I study all night, I will get a passing grade on the test). The hypothesis is critical because it bridges the gap between the realm of ideas and the real world. As specific hypotheses are tested, theories are modified and refined to reflect and incorporate the result of these tests (Figure 3.2).

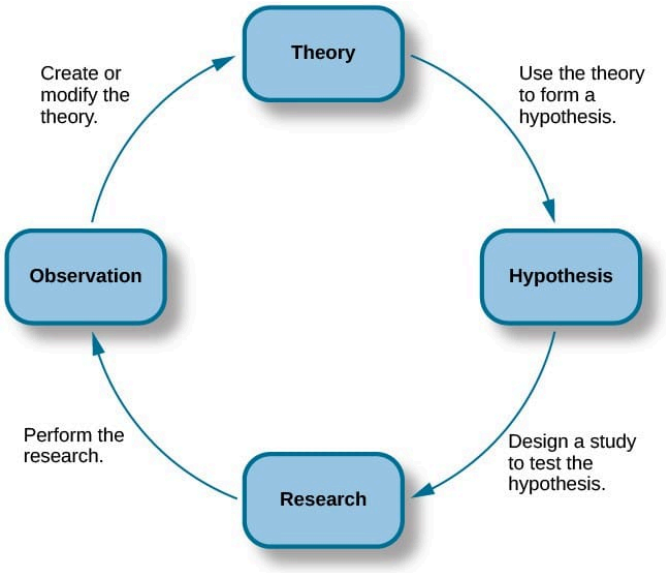


Figure 3.2.2. The scientific method of research includes proposing hypotheses, conducting research, and creating or modifying theories based on results.

https://assessments.lumenlearning.co...essments/16511

To see how this process works, let us consider a specific theory and a hypothesis that might be generated from that theory. The James-Lange theory of emotion asserts that emotional experience relies on the physiological arousal associated with the emotional state. If you walked out of your home and discovered a very aggressive snake waiting on your doorstep, your heart would begin to race and your stomach churn. According to the James-Lange theory, these physiological changes would result in your feeling of fear. A hypothesis that could be derived from this theory might be that a person who is unaware of the physiological arousal that the sight of the snake elicits will not feel fear.

A scientific hypothesis is also **falsifiable** or capable of being shown to be incorrect. For example, Sigmund Freud had lots of interesting ideas to explain various human behaviors; however, a major criticism of Freud's theories is that many of his ideas cannot be empirically tested and thus are not falsifiable. Despite this, Freud's theories are widely taught in introductory psychology texts because of their historical significance for personality psychology and psychotherapy, and these remain the root of all modern forms of therapy.

In contrast, the James-Lange theory does generate falsifiable hypotheses, such as the one described above. Some individuals who suffer significant injuries to their spinal columns are unable to feel the bodily changes that often accompany emotional experiences. Therefore, we could test the hypothesis by determining how emotional experiences differ between individuals who can detect these changes in their physiological arousal and those who do not. In fact, this research has been conducted, and while the emotional experiences of people deprived of an awareness of their physiological arousal may be less intense, they still experience emotion (Chwalisz, Diener, & Gallagher, 1988).

Scientific research's dependence on falsifiability allows for high confidence in the information that it produces. Typically, by the time information is accepted by the scientific community, it has been tested repeatedly. However, in the early years of studying

development, theories were often based on philosophy and inductive reasoning, and could not always provide empirical evidence to support these ideas. In the late 1800s, a transformation occurred when philosophy met physiology and adopted the scientific methods used by the physical sciences to explore questions about behavior and the mind.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.2.1. Hypothesis vs Theory explains the differences between the two.

https://assessments.lumenlearning.co...sessments/2697

Candela Citations

CC licensed content, Original

- Understanding Theories. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...ding-theories/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Psychology. **Provided by**: OpenStax. **Retrieved from**: https://openstax.org/details/books/psychology. **License**: CC BY: Attribution
- Understanding Theories. **Authored by**: Sonja Ann Miller. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...ding-theories/. **License**: CC BY-SA: Attribution-ShareAlike

All rights reserved content

- Hypothesis vs Theory. **Provided by**: Udacity. **Retrieved from**: https://youtu.be/DRDhDo2dDtg. **License**: *All Rights Reserved*

This page titled 3.1: Understanding Theories is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

3.2: History of Developmental Psychology



Figure 3.3.1. Some key figures in the early development of psychology. Front row: Sigmund Freud, G. Stanley Hall, Carl Jung. Back row: Abraham A. Brill, Ernest Jones, Sándor Ferenczi, at Clark University in Worcester, Massachusetts. Date: September 1909.

The scientific study of children and adolescents began in the late nineteenth century and blossomed in the early twentieth century as pioneering psychologists sought to uncover the secrets of human behavior by studying its development. Three early scholars, John Locke, Jean-Jacques Rousseau, and Charles Darwin, proposed theories of human behavior that are the "direct ancestors of the three major theoretical traditions" of developmental psychology today" (Vasta et al., 1998, p. 10). Locke, a British empiricist, adhered to a strict environmentalist position, that the mind of the newborn as a tabula rasa ("blank slate") on which knowledge is written through experience and learning. Rousseau, a Swiss philosopher who spent much of his life in France, proposed a nativistic model in his famous novel, *Emile*, in which development occurs according to innate processes progressing through three stages: Infans (infancy), puer (childhood), and adolescence. Rousseau detailed some of the necessary progression through these stages in order to develop into an ideal citizen. Although some aspects of his text were controversial, Rousseau's ideas were powerfully influential on educators at the time. Finally, the work of Darwin, the British biologist famous for his theory of evolution, led others to suggest that development proceeds through evolutionary recapitulation, with many human behaviors having their origins in successful adaptations in the past as "ontogeny recapitulates phylogeny."

G. Stanley Hall

Darwin's theories greatly influenced G. Stanley Hall, who believed that children developed over their lifetime much in the same way that a species evolved throughout time. His interests focused on childhood development, adolescence, and evolutionary theory. His significant contributions to the field are that he taught the first courses in child development, several of his students becoming leading researchers in the field, and he established scientific journals for the publication of child development research. He was also the first president of the American Psychological Association.

James Mark Baldwin

Another early contributor to the study of development was James Mark Baldwin (1861-1934), a Princeton-educated American philosopher and psychologist who did quantitative and experimental research on infant development. He made important contributions to early psychology, psychiatry, and the theory of evolution. Baldwin wrote essays such as "Mental Development in the Child and the Race: Methods and Processes," which made a vivid impression on Jean Piaget (who later developed the most popular theory of cognitive development) and Lawrence Kohlberg (who developed a theory about moral judgment and

development).

John B. Watson

The 20th century marked the formation of qualitative distinctions between children and adults. When John Watson wrote the book *Psychological Care Of Infant And Child,* in 1928, he sought to add clarification surrounding behaviorists' views on child care and development. Watson was the founder of the field of behaviorism, which emphasized the role of nurture, or the environment, in human development. He believed, based on Locke's environmentalist position, that human behavior can be understood in terms of experiences and learning. He believed that all behaviors are learned, or conditioned, as evidenced by his famous "Little Albert" study, in which he conditioned an infant to fear a white rat. In Watson's book on the care of the infant and child, Watson explained that children should be treated as a young adult—with respect, but also without emotional attachment. In the book, he warned against the inevitable dangers of a mother providing too much love and affection. Watson explained that love, along with all things observable behavior, is conditioned. Watson supported his warnings by mentioning invalidism, saying that society does not overly comfort children as they become young adults in the real world, so parents should not set up these unrealistic expectations. His book was highly criticized but was still influential in promoting more research into early childhood behavior and development.

https://assessments.lumenlearning.co...sessments/2669

Sigmund Freud

Another name you are probably familiar with who was influential in the study of development is Sigmund Freud. Sigmund Freud's model of 'psychosexual development' grew out of his psychoanalytic approach to human personality and psychopathology. In sharp contrast to the objective approach espoused by Watson, Freud based his model of child development on his own and his patients' recollections of their childhood. He developed a stage model of development in which the libido, or sexual energy, of the child focuses on different "zones" or areas of the body as the child grows to adulthood. Freud's model is an "interactionist" one since he believed that although the sequence and timing of these stages are biologically determined, successful personality development depends on the experiences the child has during each stage. Although the details of Freud's developmental theory have been widely criticized, his emphasis on the importance of early childhood experiences, prior to five years of age, has had a lasting impact.

https://assessments.lumenlearning.co...sessments/2664

Arnold Gesell

Arnold Gesell, a student of G. Stanley Hall, carried out the first large-scale detailed study of children's behavior, authoring several books on the topic in the 1920s, 30s, and 40s. His research revealed consistent patterns of development, supporting his view that human development depends on biological "maturation," with the environment providing only minor variations in the age at which a skill might emerge but never affecting the sequence or pattern. Gesell's research produced norms, such as the order and the average age range in which a variety of early behaviors such as sitting, crawling, and walking emerge. In conducting his studies, Gesell developed sophisticated observational techniques, including one-way viewing screens and recording methods that did not disturb the child.

Jean Piaget

Jean Piaget (1896-1980) is considered one of the most influential psychologists of the twentieth century, and his stage theory of cognitive development revolutionized our view of children's thinking and learning. His work inspired more research than any other theorist, and many of his concepts are still foundational to developmental psychology. His interest lay in children's knowledge, their thinking, and the qualitative differences in their thinking as it develops. Although he called his field "genetic epistemology," stressing the role of biological determinism, he also assigned great importance to experience. In his view, children "construct" their knowledge through processes of "assimilation," in which they evaluate and try to understand new information, based on their existing knowledge of the world, and "accommodation," in which they expand and modify their cognitive structures based on new experiences.

https://assessments.lumenlearning.co...essments/16512

Candela Citations

CC licensed content, Original

- History of Developmental Psychology. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...al-psychology/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Developmental Psychology. **Provided by**: New World Encyclopedia. **Retrieved from**: https://www.newworldencyclopedia.org...tal_psychology. **License**: CC BY-SA: Attribution-ShareAlike

CC licensed content, Specific attribution

- Schemas, Assimilation, and Accommodation. **Provided by**: Khan Academy . **Retrieved from**: https://www.newworldencyclopedia.org...tal_psychology. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

This page titled 3.2: History of Developmental Psychology is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

3.3: Contemporary Psychological Approaches

Many of the early psychological theories and approaches changed over the years, as new evidence shed light on behavior and development. Some of these approaches have remained a constant influence, some have changed significantly over the years, and some have faded into history. Currently, several major contemporary approaches apply to development: psychodynamic, behavioral, humanistic, cognitive, contextual, biological, and evolutionary approaches.

Regardless of changes to these psychological approaches, throughout history and still in the present day, key issues remain among which developmental theorists often disagree. Particularly oft-disputed is the role of early experiences on later development in opposition to current behavior reflecting present experiences–namely the *passive versus active issue*. Likewise, whether or not development is best viewed as occurring in stages or rather as a gradual and cumulative process of change has traditionally been up for debate – a question of *continuity versus discontinuity.* Also, consider whether the pattern of change the same for everyone, or are there different patterns of change—one course of development versus many courses. Further, the role of heredity and the environment in shaping human development is a much-contested topic of discussion – also referred to as *nature versus nurture debate*. We will examine each of these issues in more detail throughout the chapter.

Candela Citations

CC licensed content, Original

- Contemporary Psychological Approaches. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...al-approaches/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Psychodynamic Theories. **Authored by**: Jessica Traylor . **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...amic-theories/. **License**: CC BY: Attribution

This page titled 3.3: Contemporary Psychological Approaches is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

3.4: Psychodynamic Approach

Freud's Psychoanalytic Approach

As previously mentioned, Sigmund Freud (1856-1939), an Austrian neurologist, is probably the most recognized name in psychology, His psychodynamic approach **to** development and psychopathology dominated the field of psychiatry until the growth of behaviorism in the 1930s and beyond. The **psychodynamic approach** emphasizes unconscious psychological processes (for example, wishes and fears of which we are not fully aware), and contends that childhood experiences are crucial in shaping adult personality (Thorne & Henley, 2005). Freud theorized that many of his patients' problems arose from the unconscious mind. In Freud's view, the unconscious mind was a repository of feelings and urges of which we have no awareness. Gaining access to the unconscious, then, was crucial to the successful resolution of the patient's problems. According to Freud, the unconscious mind could be accessed through dream analysis, by examinations of the first words that came to people's minds, and through seemingly innocent slips of the tongue.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

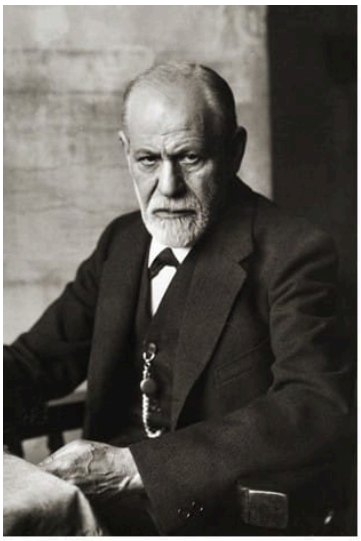
View this YouTube Video online

Video 3.5.1. Psychoanalytic Theory explains the various levels of the mind and how we develop and behave based on the influences of these various levels.

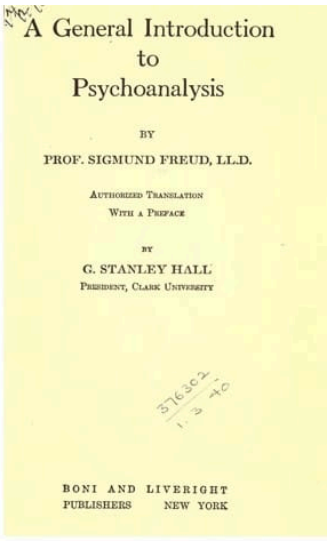
https://assessments.lumenlearning.co...essments/16513

https://assessments.lumenlearning.co...essments/16514

Freud also made contributions to the advancement of psychotherapy. He began working with 'hysterical' patients and discovered that when they began to talk about some of their life experiences, particularly those that took place in early childhood, their symptoms disappeared. This led him to suggest the first purely psychological explanation for physical problems and mental illness. What he proposed was that unconscious motives, desires, fears, and anxieties drive our actions. When upsetting memories or thoughts begin to find their way into our consciousness, we develop defenses to shield us from these painful realities, called defense mechanisms. Freud believed that many mental illnesses are a result of a person's inability to accept reality.



(a)



(b)

Figure 3.5.1. (a) Sigmund Freud was highly influential in the history of psychology. (b) One of his many books, *A General Introduction To Psychoanalysis*, shared his ideas about psychoanalytical therapy; it was published in 1922.

While many of Freud's theories have lost favor, he is still considered to be a very influential figure in the area of development. Freud was the first to systematically study and theorize the workings of the unconscious mind in the manner that we associate with modern psychology. Because psychodynamic theories are difficult to prove wrong, evaluating those theories, in general, is difficult in that we cannot make definite predictions about a given individual's behavior using the theories. The theory is also considered to be sexist in suggesting that women who do not accept an inferior position in society are somehow psychologically flawed. Freud focused on the darker side of human nature and suggested that much of what determines our actions are unknown to us. Others criticize that the psychodynamic approach is too deterministic, relating to the idea that all events, including human action, are ultimately determined by causes regarded as external to the will, thereby leaving little room for the idea of free will (De St Aubin, 2004).

The psychodynamic perspective has evolved considerably since Freud's time, encompassing all the theories in psychology that see human functioning based upon the interaction of conscious and unconscious drives and forces within the person, and between the different structures of the personality.

Erickson's Psychosocial Theory

Now, let us turn to a less controversial psychodynamic theorist, the father of developmental psychology, Erik Erikson (1902-1994). Erikson was a student of Freud's and expanded on his theory of psychosexual development by emphasizing the importance of culture in parenting practices and motivations and adding stages of adult development (Erikson, 1950; 1968).



Figure 3.5.2. Erik Erikson

As an art school dropout with an uncertain future, young Erik Erikson met Freud's daughter, Anna Freud, while he was tutoring the children of an American couple undergoing psychoanalysis in Vienna. It was Anna Freud who encouraged Erikson to study psychoanalysis. Erikson received his diploma from the Vienna Psychoanalytic Institute in 1933, and as Nazism spread across Europe, he fled the country and immigrated to the United States that same year. Erikson later proposed a psychosocial theory of development, suggesting that an individual's personality develops throughout the lifespan—a departure from Freud's view that personality is fixed in early life. In his theory, Erikson emphasized the social relationships that are important at each of the eight-stage of psychosocial development, each of which includes a conflict or developmental task. The development of a healthy personality and a sense of competence depend on the successful completion of each task. His stage theory was also different than his predecessor in that he emphasized development throughout the lifespan, not just until adulthood.

Table 3.5.1. Erikson's Psychosocial Stage Theory

Stage	Approximate Age (years)	Virtue: Developmental Task	Description
1	0–1	**Hope: Trust vs. Mistrust**	Trust (or mistrust) that basic needs, such as nourishment and affection, will be met
2	1–3	**Will: Autonomy vs. Shame**	Sense of independence in many tasks develops
3	3–6	**Purpose: Initiative vs. Guilt**	Take initiative on some activities, may develop guilt when success not met or boundaries overstepped
4	7–11	**Competence: Industry vs. Inferiority**	Develop self-confidence in abilities when competent or sense of inferiority when not
5	12–18	**Fidelity: Identity vs. Role Confusion**	Experiment with and develop identity and roles
6	19–39	**Love: Intimacy vs. Isolation**	Establish intimacy and relationships with others
7	40–64	**Care: Generativity vs. Stagnation**	Contribute to society and be part of a family
8	65+	**Wisdom: Integrity vs. Despair**	Assess and make sense of life and meaning of contributions

Erikson's eight stages form a foundation for discussions on emotional and social development during the lifespan. Keep in mind, however, that these stages or crises can occur more than once or at different times of life. For instance, a person may struggle with a lack of trust beyond infancy. Erikson's theory is criticized for focusing so heavily on stages and assuming that the completion of one stage is a prerequisite for the next crisis of development. His theory also focuses on the social expectations found in certain cultures, but not in all. For instance, the idea that adolescence is a time of searching for identity might translate well in the

middle-class culture of the United States, but not as well in cultures where the transition into adulthood coincides with puberty through rites of passage and where adult roles offer fewer choices.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.5.2. Erikson's Psychosocial Development explains how humans progress through various stages.

By and large, Erikson's view that development continues throughout the lifespan is very significant and has received great recognition. However, like Freud's theory, it has been criticized for focusing on more men than women and also for its vagueness, making it difficult to test rigorously.

https://assessments.lumenlearning.co...essments/16517

https://assessments.lumenlearning.co...essments/16518

Candela Citations

CC licensed content, Original

- Psychodynamic Approach. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...amic-approach/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Psychodynamic Theories. **Authored by**: Jessica Traylor . **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...amic-theories/. **License**: CC BY: Attribution

CC licensed content, Specific attribution

- Psychoanalysis Theory. **Authored by**: Shreena Desai. **Provided by**: Khan Academy . **Retrieved from**: https://youtu.be/jdawTFsCNtc. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- Erikson's Psychosocial Development. **Authored by**: Shreena Desai. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/jdawTFsCNtc. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

This page titled 3.4: Psychodynamic Approach is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

3.5: Behavioral Approach

Behaviorism emerged early in the 20th century and became a significant force in American psychology. The **behavioral approach** suggests that the keys to understanding development are observable behavior and external stimuli in the environment. Behaviorism is a theory of learning, and learning theories focus on how we are conditioned to respond to events or stimuli. These theories explain how experience determines behavior.

Championed by psychologists such as John B. Watson (1878–1958) and B. F. Skinner (1904–1990), behaviorism rejected any reference to mind and viewed overt and observable behavior as the proper subject matter of psychology. Through the scientific study of behavior, it was hoped that laws of learning could be derived that would promote the prediction and control of behavior. Russian physiologist Ivan Pavlov (1849–1936) influenced early behaviorism in America. His work on conditioned learning, popularly referred to as classical conditioning, provided support for the notion that learning and behavior were controlled by events in the environment and could be explained with no reference to mind or consciousness (Fancher, 1987).

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.6.1. *How to Train a Brain* explains behaviorist theories of classical and operant conditioning.

https://assessments.lumenlearning.co...essments/16519

Pavlov's Classical Conditioning

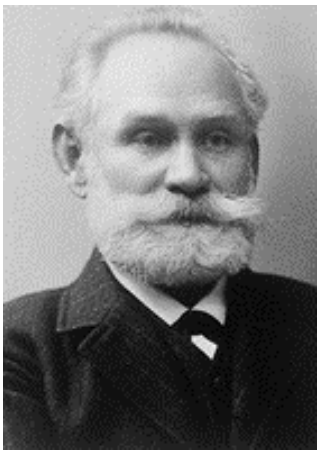


Figure 3.6.1. Ivan Pavlov

Early work in the field of behavior was conducted by the Russian physiologist Ivan Pavlov (1849–1936). Pavlov studied a form of learning behavior called a conditioned reflex, in which an animal or human produced a reflex (unconscious) response to a stimulus and, over time, was conditioned to produce the response to a different stimulus that the experimenter associated with the original stimulus. The reflex Pavlov worked with was salivation in response to the presence of food. The salivation reflex could be elicited using a second stimulus, such as a specific sound, that was presented in association with the initial food stimulus several times. Once the response to the second stimulus was "learned," the food stimulus could be omitted. Pavlov's "classical conditioning" is only one form of learning behavior studied by behaviorists.

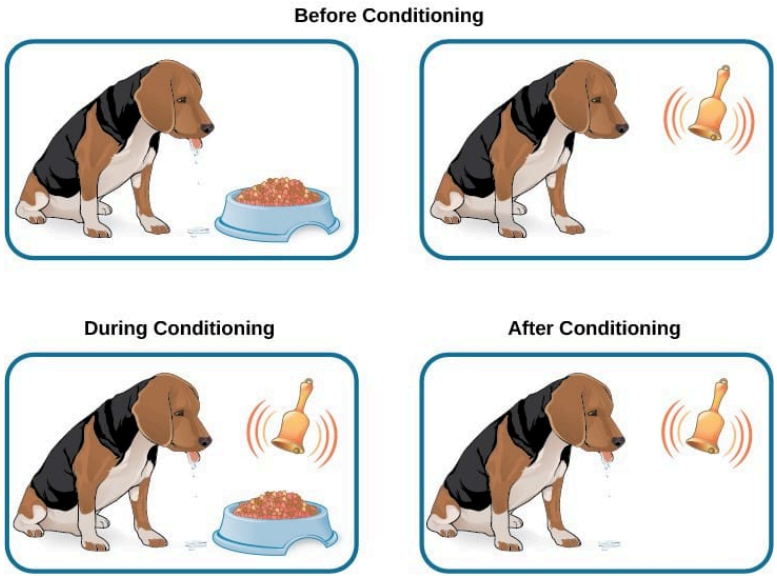


Figure 3.6.2. Before conditioning, an unconditioned stimulus (food) produces an unconditioned response (salivation), and a neutral stimulus (bell) does not produce a response. During conditioning, the unconditioned stimulus (food) is presented repeatedly just after the presentation of the neutral stimulus (bell). After conditioning, the neutral stimulus alone produces a conditioned response (salivation), thus becoming a conditioned stimulus.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.6.2. Classical Conditioning explains the process used in classical learning.

https://assessments.lumenlearning.co...essments/16520

Watson and Behaviorism



Figure 3.6.3. John B. Watson

John B. Watson (1878–1958) was an influential American psychologist whose most famous work occurred during the early 20th century at Johns Hopkins University. Watson thought that the study of consciousness was flawed because objective analysis of the mind was impossible. Watson preferred to focus directly on observable behavior and try to bring that behavior under control. Watson was a major proponent of shifting the focus of psychology from the mind to behavior, and this approach of observing and controlling behavior, and is considered the father of **behaviorism**. A significant object of study by behaviorists was learned behavior and its interaction with inborn qualities of the organism. Behaviorism commonly used animals in experiments under the assumption that what was learned using animal models could, to some degree, be applied to human behavior. Indeed, Tolman (1938) stated, "I believe that everything important in psychology (except … such matters as involve society and words) can be investigated in essence through the continued experimental and theoretical analysis of the determiners of rat behavior at a choice-point in a maze."

Behaviorism dominated experimental psychology for several decades, and its influence can still be felt today (Thorne & Henley, 2005). Behaviorism is largely responsible for establishing psychology as a scientific discipline through its objective methods and especially experimentation. In addition, this approach is used in behavioral and cognitive-behavioral therapy. Behavior modification is commonly used in classroom settings. Behaviorism has also led to research on environmental influences on human behavior.

Skinner and Operant Conditioning

B. F. Skinner (1904–1990) was an American psychologist. Like Watson, Skinner was a behaviorist, and he concentrated on how behavior was affected by its consequences. Therefore, Skinner spoke of reinforcement and punishment as major factors in driving behavior. As a part of his research, Skinner developed a chamber that allowed the careful study of the principles of modifying behavior through reinforcement and punishment. This device, known as an operant conditioning chamber (or more familiarly, a Skinner box), has remained a crucial resource for researchers studying behavior (Thorne & Henley, 2005).

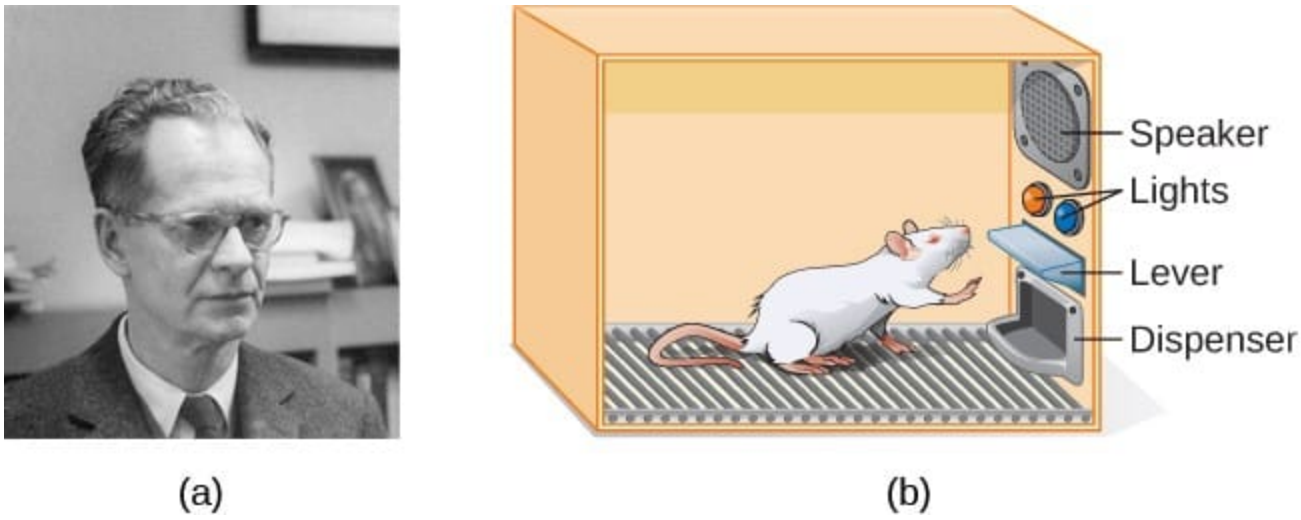


Figure 3.6.4. (a) B. F. Skinner is famous for his research on operant conditioning. (b) Modified versions of the operant conditioning chamber, or Skinner box, are still widely used in research settings today.

The Skinner box is a chamber that isolates the subject from the external environment and has a behavior indicator such as a lever or a button. When the animal pushes the button or lever, the box can deliver a positive reinforcement of the behavior (such as food) or a punishment (such as noise) or a token conditioner (such as a light) that is correlated with either the positive reinforcement or punishment.

Skinner's focus on positive and negative reinforcement of learned behaviors had a lasting influence in psychology that has waned somewhat since the growth of research in cognitive psychology. Despite this, conditioned learning is still used in human behavioral modification. Skinner's two widely read and controversial popular science books about the value of operant conditioning for creating happier lives remain as thought-provoking arguments for his approach (Greengrass, 2004).

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.6.3. Operant Conditioning explains the various types of consequences that influence behavior.

https://assessments.lumenlearning.co...essments/16521

Social Learning Theory: Observational Learning

Albert Bandura's ideas about learning were different from those of strict behaviorists. Bandura proposed a brand of behaviorism called **social learning theory**, which took cognitive processes and social contexts into account; it takes into consideration the dynamic and reciprocal interaction of the person, environment, and behavior. According to Bandura, pure behaviorism could not explain why learning can take place in the absence of external reinforcement. He felt that internal mental processes, like thinking and motivation, must also have a role in learning.

Observational learning is a component of Albert Bandura's Social Learning Theory (Bandura, 1977). In **observational learning**, we learn by watching others and then imitating, or modeling, what they do or say. The individuals performing the imitated behavior are called **models**. Bandura identified three kinds of models: live, verbal, and symbolic. A live model demonstrates a behavior in person. A verbal instructional model does not perform the behavior but instead explains or describes the behavior. A symbolic

model demonstrates behavior in forms of media.

Of course, we do not learn a behavior by merely observing a model. Bandura described specific steps in the process of modeling that must be followed if learning is to be successful: attention, retention, reproduction, and motivation. First, you must be focused on what the model is doing—you have to pay attention. Next, you must be able to retain, or remember, what you observed; this is retention. Then, you must be able to perform the behavior that you observed and committed to memory; this is reproduction. Finally, you must have motivation. You need to want to copy the behavior, and whether or not you are motivated depends on what happened to the model. If you saw that the model was reinforced for her behavior, you will be more motivated to copy her. This is known as **vicarious reinforcement**. On the other hand, if you observed the model being punished, you would be less motivated to copy her. This is called **vicarious punishment**.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.6.4. Albert Bandura Bobo Doll Experiment explains how learning occurs through observation and demonstrates this through his Bobo doll experiment with preschool children.

https://assessments.lumenlearning.co...essments/16522

https://assessments.lumenlearning.co...sessments/4418

Candela Citations

CC licensed content, Original

- Behavioral Approach. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...oral-approach/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Psychology. **Authored by**: Rose M. Spielman, Kathryn Dumper, William Jenkins, Arlene Lacombe, Marilyn Lovett, Marion Perlmutter. **Provided by**: Open Stax. **Retrieved from**: https://openstax.org/details/books/psychology. **License**: CC BY: Attribution

CC licensed content, Specific attribution

- Albert Bandura Bobo Doll Experiment. **Authored by**: kpharden. **Retrieved from**: https://youtu.be/Z0iWpSNu3NU. **License**: All Rights Reserved
- How to Train a Brain: Crash Course Psychology #11. **Provided by**: CrashCourse. **Retrieved from**: https://youtu.be/qG2SwE_6uVM. **License**: All Rights Reserved
- Classical Conditioning. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://youtu.be/sXvAJZjoSOw. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- Operant Conditioning. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://youtu.be/Bdvu2DvSKh4. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

This page titled 3.5: Behavioral Approach is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

3.6: Humanistic Approach

During the early 20th century, American psychology was dominated by behaviorism and psychoanalysis. However, some psychologists were uncomfortable with what they viewed as limited perspectives being so influential to the field. They objected to the pessimism and determinism (all actions driven by the unconscious) of Freud. They also disliked the reductionism, or simplifying nature, of behaviorism. Behaviorism is also deterministic at its core because it sees human behavior as entirely determined by a combination of genetics and the environment. Some psychologists began to form their own ideas that emphasized personal control, intentionality, and a true predisposition for "good" as necessary for our self-concept and our behavior. Thus, humanism emerged. **Humanism** is a perspective within psychology that emphasizes the potential for good that is innate to all humans. Two of the most well-known proponents of humanistic psychology are Abraham Maslow and Carl Rogers (O'Hara, n.d.).

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.7.1. Humanistic Theory explained.

https://assessments.lumenlearning.co...essments/16528

Maslow's Hierarchy of Needs

Abraham Maslow (1908–1970) was an American psychologist who is best known for proposing a hierarchy of human needs in motivating behavior (figure below). Maslow asserted that so long as basic needs necessary for survival were met (e.g., food, water, shelter), higher-level needs (e.g., social needs) would begin to motivate behavior. According to Maslow, the highest-level needs relate to self-actualization, a process by which we achieve our full potential. The focus on the positive aspects of human nature that are characteristic of the humanistic perspective is evident (Thorne & Henley, 2005).

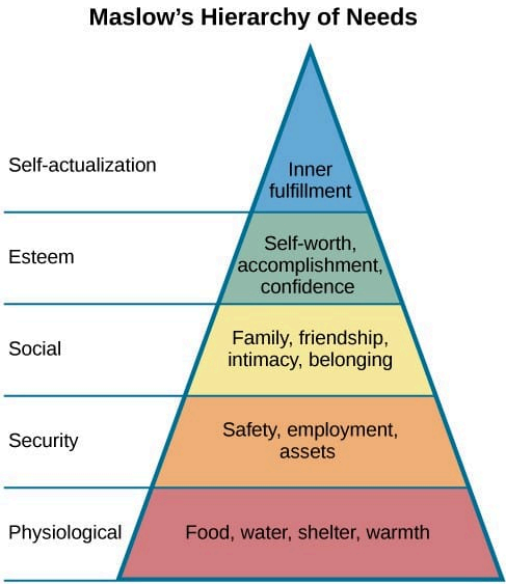


Figure 3.7.1. Maslow's hierarchy of needs.

Humanistic psychologists rejected, on principle, the research approach based on reductionist experimentation in the tradition of the physical and biological sciences, because it missed the "whole" human being. Beginning with Maslow and Rogers, there was an insistence on a humanistic research program. This program has been mostly qualitative (not measurement-based), but there exist a number of quantitative research strains within humanistic psychology, including research on happiness, self-concept, meditation, and the outcomes of humanistic psychotherapy (Friedman, 2008).

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.7.2. Maslow's Hierarchy of Needs explained.

https://assessments.lumenlearning.co...sessments/2670

https://assessments.lumenlearning.co...essments/16529

Candela Citations

CC licensed content, Original

- Humanistic Approach. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...stic-approach/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Psychology. **Authored by**: Rose M. Spielman, Kathryn Dumper, William Jenkins, Arlene Lacombe, Marilyn Lovett, Marion Perlmutter. **Provided by**: OpenStax. **Retrieved from**: https://openstax.org/details/books/psychology. **License**: CC BY: Attribution

CC licensed content, Specific attribution

- Humanistic Theory. **Authored by**: Shreena Desai. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/Bdvu2DvSKh4. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- Maslow's Hierarchy of Needs. **Authored by**: Shreena Desai. **Provided by**: Khan Academy . **Retrieved from**: https://youtu.be/Bdvu2DvSKh4. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

This page titled 3.6: Humanistic Approach is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

3.7: Cognitive Approach

Behaviorism's emphasis on objectivity and focus on external behavior had pulled psychologists' attention away from the mind for a prolonged time. The early work of the humanistic psychologists redirected attention to the individual human as a whole, and as a conscious and self-aware being. By the 1950s, new disciplinary perspectives in linguistics, neuroscience, and computer science were emerging, and these areas revived interest in the mind as a focus of scientific inquiry. This particular perspective has come to be known as the cognitive revolution (Miller, 2003). By 1967, Ulric Neisser published the first textbook entitled *Cognitive Psychology*, which served as a core text in cognitive psychology courses around the country (Thorne & Henley, 2005).

Although no one person is entirely responsible for starting the cognitive revolution, Noam Chomsky was very influential in the early days of this movement. Chomsky (1928–), an American linguist, was dissatisfied with the influence that behaviorism had had on psychology. He believed that psychology's focus on behavior was short-sighted and that the field had to re-incorporate mental functioning into its purview if it were to offer any meaningful contributions to understanding behavior (Miller, 2003).

European psychology had never really been as influenced by behaviorism as had American psychology, and thus, the cognitive revolution helped reestablish lines of communication between European psychologists and their American counterparts. Furthermore, psychologists began to cooperate with scientists in other fields, like anthropology, linguistics, computer science, and neuroscience, among others. This interdisciplinary approach often was referred to as the cognitive sciences, and the influence and prominence of this particular perspective resonates in modern-day psychology (Miller, 2003). Today, the **cognitive approach** is the area of psychology that focuses on studying cognitions, or thoughts, and their relationship to our experiences and our actions.

Cognitive psychologists have research interests that span a spectrum of topics, ranging from attention to problem-solving to language to memory. The approaches used in studying these topics are equally diverse. Given such diversity, cognitive psychology is not captured in one chapter of this text per se; rather, various concepts related to cognitive psychology will be covered in relevant portions of the chapters in this text on sensation and perception, thinking and intelligence, memory, lifespan development, social psychology, and therapy.

https://assessments.lumenlearning.co...sessments/2674

Piaget's Psychological Constructivism

Jean Piaget (1896–1980) is another stage theorist who studied childhood development. Instead of approaching development from a psychoanalytical or psychosocial perspective, Piaget focused on children's cognitive growth. He believed that thinking is a central aspect of development and that children are naturally inquisitive. However, he said that children do not think and reason like adults (Piaget, 1930, 1932). His theory of cognitive development holds that our cognitive abilities develop through specific stages, which exemplifies the discontinuity approach to development. As we progress to a new stage, there is a distinct shift in how we think and reason.



Figure 3.8.1. Jean Piaget

Piaget believed that we are continuously trying to maintain cognitive equilibrium or a balance or cohesiveness in what we see and what we know. Children have much more of a challenge in maintaining this balance because they are continually being confronted with new situations, new words, new objects, etc. When faced with something new, a child may either fit it into an existing framework (**schema**) and match it with something known (**assimilation**) such as calling all animals with four legs "doggies" because he or she knows the word doggie, or expand the framework of knowledge to accommodate the new situation (**accommodation**) by learning a new word to more accurately name the animal. This is the underlying dynamic in our cognition. Even as adults, we continue to try and make sense of new situations by determining whether they fit into our old way of thinking or whether we need to modify our thoughts.

As we mature and develop our schemas, we move through four distinct stages of cognitive development. Piaget proposed that specific developmental tasks were to be mastered during each stage, and as children progressed, they became more cognitively sophisticated.

https://assessments.lumenlearning.co...essments/16524

Table 3.8.1. Piaget's stages of cognitive development

Age	Stage	Description of Cognitive Development	Major Developmental Tasks
Infancy(0-2 years)	Sensorimotor	Take in sensory information and respond through motor activity. Motor responses begin as reflexes, become purposeful, and then become more sophisticated in response to sensory information.	• Master object permanence· • Learn to use symbols, images, and words to represent objects and thoughts· • Develop a sense of "self" separate from others
Preschool(2-7 years)	Pre-Operational	Display of intelligent thought. Children attempt to understand and explain their world but will make many errors in their assessments.	• Correct errored thinking· • Overcome egocentric perspective

Age	Stage	Description of Cognitive Development	Major Developmental Tasks
Elementary School(7-11 years)	Concrete Operational	Children use operations (internal operations) to think logically and systematically. Operations allow the mental manipulation of information.	• Master conservation· • Understand reversibility· • Spontaneously classify information/objects· • Understand deception
Adolescence (11+ years)	Formal Operational	Teens and adults develop systematic, logical algorithms for thinking through problems.	• Capable of abstract thought· • Thinking about hypotheticals· • Tends to be idealistic

As with other major contributors to theories of development, several of Piaget's ideas have come under criticism based on the results of further research. For example, several contemporary studies support a model of development that is more continuous than Piaget's discrete stages (Courage & Howe, 2002; Siegler, 2005, 2006). Many others suggest that children reach cognitive milestones earlier than Piaget describes (Baillargeon, 2004; de Hevia & Spelke, 2010). Looking across cultures reveals considerable variation in what children are able to do at various ages, and Piaget may have underestimated what children are capable of given the right circumstances.

According to Piaget, the highest level of cognitive development is formal operational thought, which develops between 11 and 20 years old. However, many developmental psychologists disagree with Piaget, suggesting a fifth stage of cognitive development, known as the postformal stage (Basseches, 1984; Commons & Bresette, 2006; Sinnott, 1998). In postformal thinking, decisions are made based on situations and circumstances, and logic is integrated with emotion as adults develop principles that depend on contexts. One way that we can see the difference between an adult in postformal thought and an adolescent (or adult) in formal operations is in terms of how they handle emotionally charged issues or integrate systems of thought.

Information-Processing Theories

Information-processing theories have become an influential alternative to Piaget's approach. The theory assumes that even complex behavior such as learning, remembering, categorizing, and thinking can be broken down into a series of individual, specific steps, and as a person develops strategies for processing information, they can learn more complex information. This perspective equates the mind to a computer, which is responsible for analyzing information from the environment.

The most common information-processing model is applied to an understanding of memory and the way that information is encoded, stored, and then retrieved from the brain (Atkinson & Shiffrin, 1968), but information processing approaches also apply to cognitive processing in general. According to the standard information-processing model for mental development, the mind's machinery includes attention mechanisms for bringing information in, working memory for actively manipulating information, and long-term memory for passively holding information so that it can be used in the future.

This theory addresses how, as children grow, their brains likewise mature, leading to advances in their ability to process and respond to the information they received through their senses. The theory emphasizes a continuous pattern of development, in contrast with cognitive-developmental theorists such as Piaget, who thought development occurred in stages. Developmental psychologists who adopt the information-processing perspective account for mental development in terms of maturational changes in basic components of a child's mind. At the same time, they do not offer a complete explanation of behavior. For example, they have paid little attention to behavior such as creativity, in which the most profound ideas often are developed in a seemingly not logical, nonlinear manner. Moreover, they do not take into account the social context in which development takes place.

https://assessments.lumenlearning.co...essments/16526

link to learning

View a brief video recapping some of the major concepts explored by cognitive psychologists.

Candela Citations

CC licensed content, Original

- Cognitive Approach. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...tive-approach/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Piaget's Stages of Cognitive Development. **Authored by**: Carole Yule. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/Jt3-PIC2nCs. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- Psychology. **Authored by**: Rose M. Spielman, Kathryn Dumper, William Jenkins, Arlene Lacombe, Marilyn Lovett, & Marion Perlmutter. **Provided by**: OpenStax. **Retrieved from**: https://openstax.org/details/books/psychology. **License**: CC BY: Attribution

This page titled 3.7: Cognitive Approach is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

3.8: Contextual Approach

The **contextual approach** considered the relationship between individuals and their physical, cognitive, and social worlds. They also examine socio-cultural and environmental influences on development. We will focus on two influential theorists who pioneered this perspective: Lev Vygotsky and Urie Bronfenbrenner. Lev Vygotsky was a Russian psychologist who is best known for his sociocultural theory. He believed that social interaction plays a critical role in children's learning; through such social interactions, children go through a continuous process of scaffolded learning. Urie Bronfenbrenner developed the ecological systems theory to explain how everything in a child and the child's environment affects how a child grows and develops. He labeled different aspects or levels of the environment that influence children's development.

https://assessments.lumenlearning.co...essments/16530

Vygotsky's Sociocultural Theory



Figure 3.8.1. Lev Vygotsky, founder of the sociocultural theory, which emphasizes contextual factors in cognitive development

Modern social learning theories stem from the work of Russian psychologist Lev Vygotsky (Kozulin, 1990). Vygotsky's ideas are most recognized for identifying the role of social interactions and culture in the development of higher-order thinking skills. His theory is especially valuable for the insights it provides about the dynamic "interdependence between individual and social processes in the construction of knowledge" (John-Steiner & Mahn, 1996, p. 192). Vygotsky's views are often considered primarily as cognitive development theories, focusing on qualitative changes in the development of thought, language, and higher-order thinking skills. Although Vygotsky's intent was mainly to understand higher psychological processes in children, his ideas have many implications and practical applications for learners of all ages.

Three themes are often identified with Vygotsky's ideas of sociocultural learning: (1) human development and learning originate in social, historical, and cultural interactions, (2) use of psychological tools, particularly language, mediate development of higher mental functions, and (3) learning occurs within the Zone of Proximal Development. While we discuss these ideas separately, they are closely interrelated, non-hierarchical, and connected.

Vygotsky's **sociocultural theory** emphasizes the importance of culture and interaction in the development of cognitive abilities. Vygotsky contended that thinking has social origins, social interactions play a critical role, especially in the development of higher-order thinking skills, and cognitive development cannot be fully understood without considering the social and historical context within which it is embedded. He explained, "Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first between people (interpsychological) and then inside the child (intrapsychological)" (Vygotsky, 1978, p. 57). It is through working with others on a variety of tasks that a learner adopts socially

shared experiences and associated effects and acquires useful strategies and knowledge (Scott & Palincsar, 2013).

Rogoff (1990) refers to this process as guided participation, where a learner actively acquires new culturally valuable skills and capabilities through a meaningful, collaborative activity with an assisting, more experienced other. It is critical to notice that these culturally mediated functions are viewed as being embedded in sociocultural activities rather than being self-contained. Development is a "transformation of participation in a sociocultural activity," not a transmission of discrete cultural knowledge or skills (Matusov, 2015, p. 315).

https://assessments.lumenlearning.co...essments/16531

Scaffolding and the Zone of Proximal Development

Vygotsky differed with Piaget in that he believed that a person has not only a set of abilities but also a set of potential abilities that can be realized if given the proper guidance from others. He believed that through guided participation known as **scaffolding**, with a teacher or capable peer, a child could learn cognitive skills within a certain range known as the **zone of proximal development**. While Piaget's ideas of cognitive development assume that development through certain stages is biologically determined, originates in the individual, and precedes cognitive complexity, Vygotsky presents a different view in which learning drives development. The idea of learning driving development, rather than being determined by the developmental level of the learner, fundamentally changes our understanding of the learning process and has significant instructional and educational implications (Miller, 2011).

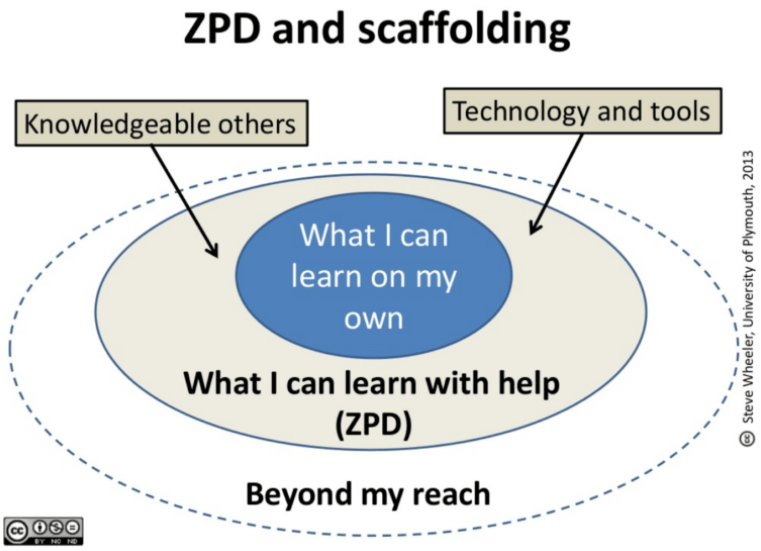


Figure 3.8.2. Model of zone of proximal development.

Have you ever taught a child to perform a task? Maybe it was brushing their teeth or preparing food. Chances are you spoke to them and described what you were doing while you demonstrated the skill and let them work along with you throughout the process. You assisted them when they seemed to need it, but once they knew what to do-you stood back and let them go. This is scaffolding. Educators have also adopted this approach to teaching. Rather than assessing students on what they are doing, they should be understood in terms of what they are capable of doing with the proper guidance.

This difference in assumptions has significant implications for the design and development of learning experiences. If we believe as Piaget did that development precedes learning, then we will make sure that new concepts and problems are not introduced until learners have developed innate capabilities to understand them. On the other hand, if we believe as Vygotsky did that learning drives development and that development occurs as we learn a variety of concepts and principles, recognizing their applicability to new tasks and new situations, then our instructional design will look very different.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.8.1. Vygotsky's Sociocultural Development explains the influence of the social environment on cognition and how more knowledgeable others help us learn within our zone of proximal development.

Bronfenbrenner's Ecological Systems Theory

Another psychologist who recognized the importance of the environment on development was American psychologist Urie Bronfenbrenner (1917-2005), who formulated the **ecological systems theory** to explain how the inherent qualities of a child and their environment interact to influence how they will grow and develop. The term "ecological" refers to a natural environment; human development is understood through this model as a long-lasting transformation in the way one perceives and deals with the environment. Bronfenbrenner's ecological theory stresses the importance of studying children in the context of multiple environments because children typically find themselves enmeshed simultaneously in different ecosystems. Each of these systems inevitably interacts with and influence each other in every aspect of the child's life, from the most intimate level to the broadest. Furthermore, he eventually renamed his theory the **bioecological model** in order to recognize the importance of biological processes in development. However, he only recognized biology as producing a person's potential, with this potential being realized or not via environmental and social forces.

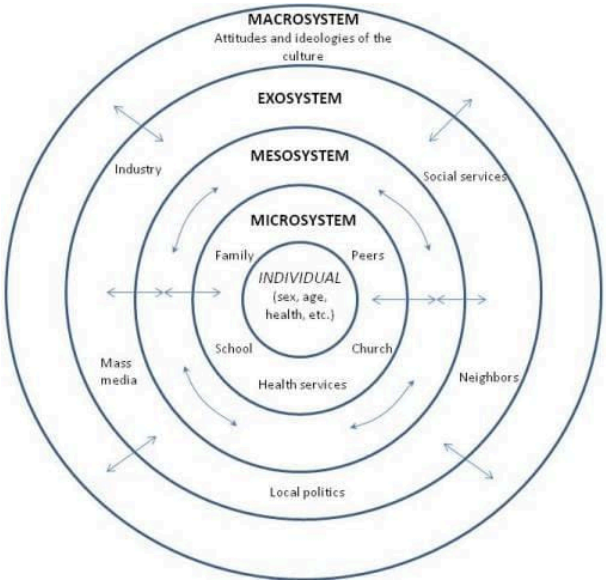


Figure 3.8.3. Bronfenbrenner's ecological theory emphasizes the influence of microsystems, mesosystems, exosystems, and macrosystems on an individual. Not pictured is the chronosystem, or the historical context and timeframe which provides the context for all the other systems. The chronosystem includes environmental events, major life transitions, and historical events.

An individual is impacted by **microsystems** such as parents or siblings–those who have direct, significant contact with the person. The input of those people is modified by the cognitive and biological state of the individual as well. These influence the person's actions, which in turn influence systems operating on them. The **mesosystem** includes larger organizational structures such as school, the family, or religion. These institutions impact the microsystems just described. For example, the religious teachings and traditions of a family may create a climate that makes the family feel stigmatized, and this indirectly impacts the child's view of themself and others. The philosophy of the school system, daily routine, assessment methods, and other characteristics can affect the child's self-image, growth, sense of accomplishment, and schedule, thereby impacting the child

physically, cognitively, and emotionally. These mesosystems both influence and are influenced by the broader contexts of the community, referred to as the **exosystem**. A community's values, history, and economy can impact the organizational structures it houses. Furthermore, the community is influenced by **macrosystems**, which are cultural elements such as global economic conditions, war, technological trends, values, philosophies, and society's responses to the global community. In sum, a child's experiences are shaped by larger forces such as family, school, religion, and culture. All of this occurs within the relevant historical context and timeframe, or **chronosystem**. The chronosystem is made up of the environmental events and transitions that occur throughout a child's life, including any socio-historical events. This system consists of all the experiences that a person has had during their lifetime.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.8.1. Bronfenbrenner's Ecological Theory explains the various layers, the interactions between them, and the influence this has on individual development.

https://assessments.lumenlearning.co...essments/16532

Candela Citations

CC licensed content, Original

- Contextual Approach. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...tual-approach/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Contextual Perspective. **Authored by**: Sonja Ann Miller. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...-perspectives/. **License**: CC BY: Attribution

CC licensed content, Specific attribution

- Vygotsky's Sociocultural Development. **Authored by**: Shreena Desai. **Provided by**: Khan Academy . **Retrieved from**: https://youtu.be/-p_-0n2f35o. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

This page titled 3.8: Contextual Approach is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

3.9: Biopsychology and Evolutionary Psychology

Biopsychology

As the name suggests, **biopsychology** explores how our biology influences our behavior. While biological psychology is a broad field, many biological psychologists want to understand how the structure and function of the nervous system are related to behavior (figure below). As such, they often combine the research strategies of both psychologists and physiologists to accomplish this goal (as discussed in Carlson, 2013). A developmental psychologist would be interested in how these physiological systems impact development and how these systems grow and change over time.

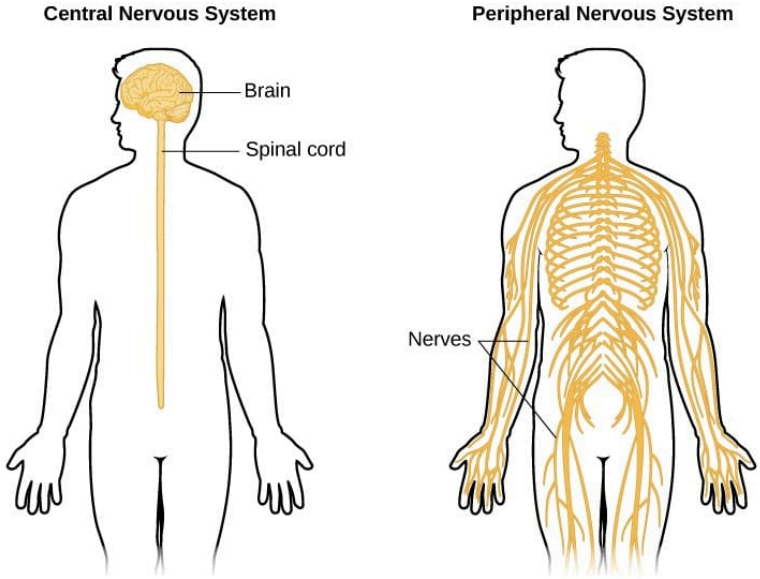


Figure 3.9.1. Biological psychologists study how the structure and function of the nervous system generate behavior.

Evolutionary Psychology

While biopsychology typically focuses on the immediate causes of behavior based on the physiology of a human or other animals, evolutionary psychology seeks to study the ultimate biological causes of behavior. To the extent that behavior is impacted by genetics, a behavior, like any anatomical characteristic of a human or animal, will demonstrate adaption to its surroundings. These surroundings include the physical environment, and since interactions between organisms can be critical to survival and reproduction, the social environment. The study of behavior in the context of evolution has its origins with Charles Darwin, the co-discoverer of the theory of evolution by natural selection. Darwin predicted that psychology would develop an evolutionary basis and that a process of natural selection creates traits in a species that are adaptive to its environment. For example, some evolutionary developmental psychologists suggest that behavior such as shyness and jealousy may be produced in part by genetic causes, presumably because they helped increase the survival rates of human's ancient relatives (Buss, 2012; Easton et al., 2007).

Evolutionary psychology has seen a resurgence in recent decades. To be subject to evolution by natural selection, behavior must have a significant genetic cause. In general, we expect all human cultures to express a behavior if it is caused genetically since the genetic differences among human groups are small. The approach taken by most evolutionary psychologists is to predict the outcome of a behavior in a particular situation based on evolutionary theory and then to make observations, or conduct experiments, to determine whether the results match the theory. It is important to recognize that these types of studies are not strong evidence that a behavior is adaptive since they lack information that the behavior is, in some part, genetic and not entirely cultural (Endler, 1986). Demonstrating that a trait, especially in humans, is naturally selected is extraordinarily challenging; perhaps, for this reason, some evolutionary psychologists are content to assume the behaviors they study have genetic determinants (Confer et al., 2010).

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.9.1. Evolution and Human Culture explains how evolutionary theory can be applied to behavior and society.

https://assessments.lumenlearning.co...essments/16533

https://assessments.lumenlearning.co...essments/16534

Candela Citations

CC licensed content, Original

- Biopsychology and Evolutionary Psychology . **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...ry-psychology/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- uf0a7tThe Evolutionary Perspective : Genetic Inheritance from our Ancestors. **Authored by**: Sonja Ann Miller. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...-our-ancestors. **License**: CC BY-SA: Attribution-ShareAlike

CC licensed content, Specific attribution

- Evolution and Human Culture. **Authored by**: Brooke Miller. **Provided by**: Khan Academy . **Retrieved from**: https://youtu.be/xlmruDxY48Y. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

This page titled 3.9: Biopsychology and Evolutionary Psychology is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

3.10: Comparing Contemporary Approaches

Developmental theories provide a set of guiding principles that describe, predict, and explain development. Some developmental theories focus on the formation of a particular quality, such as Piaget's theory of cognitive development. Other theories focus on growth that happens throughout the lifespan, such as Erikson's theory of psychosocial development. It would be natural to wonder which of the perspectives provides the most accurate account of human development, but clearly, each perspective is based on its specific premises and focuses on different aspects of development. Many developmentalists use an eclectic approach, drawing on several perspectives at the same time because the same developmental phenomenon can be looked at from several perspectives. In Table 3.10.1, we will review major contemporary approaches that you learned about in this chapter and compare their perspectives on some of the key issues in developmental psychology.

Table 3.10.1. Comparison of major contemporary approaches in development

Theory	Major ideas	Continuous or discontinuous development?	One course of development or many?	More influenced by nature or nurture?	Major Theorist(s)
Psychodynamic Approach	Behavior is motivated by inner forces, memories, and conflicts, influenced by unconscious mind and early childhood experiences.	Discontinuous; there are distinct stages of development	One course; stages are universal for everyone	Both; natural impulses & early childhood/ sociocultural experiences	Sigmund Freud, Erik Erikson
Behavioral Approach	Learning by the association of a response with a stimulus; a person comes to respond in a particular way through conditioning	Continuous; learning is ongoing without distinct stages	Many courses; learned behaviors vary by person	Mostly nurture; behavior is conditioned	Ivan Pavlov, John Watson, B.F. Skinner, Albert Bandura
Cognitive Approach	People gradually acquire, construct, and use knowledge and information, influencing behavior and development.	Both; stage theories like Piaget are discontinuous & information processing is continuous	One course; stages are universal for everyone	Both; natural maturation combined with experiences that grow skills	Jean Piaget, Richard Atkinson, Richard Shiffrin
Humanistic Approach	Individual's inherent drive towards self-actualization & contend that people have a natural capacity to make decisions about their lives and control their own behavior.	Continuous; development is ongoing and multidirectional depending on environmental circumstances	Mostly one course; Maslow's hierarchy is universally applied, but self-actualization is individualized	Mostly nurture; development is influenced by environmental circumstances and social interactions	Carl Rogers, Abraham Maslow
Contextual or Sociocultural Approach	Development occurs within a social context as part of a cultural system.	Both, but mostly continuous as an individual learns and progresses	Many courses; there are variations between individuals and cultures	Both; development is influenced by biological preparation and social experiences	Lev Vygotsky, Uri Brofenbrenner

Theory	Major ideas	Continuous or discontinuous development?	One course of development or many?	More influenced by nature or nurture?	Major Theorist(s)
Biological Approach	Physiological functions, like the central nervous system and hormones, affect behavior and development.	Continuous; constant changes to the body affect changes in development	Both; there are universal milestones for growth, but variations due to environment	Both; nature provides a foundation for development and nurture supports or inhibits changes	
Evolutionary psychology Approach	Identify behavior that is a result of our genetic inheritance from our ancestors.	Continuous; current behaviors have been shaped over multiple generations based on successful survival and reproduction	Both; behavioral genetics show similarities across the species, but our unique family history also plays a role in development	Both; our genetic history and biological impulses interact with life experiences to produce individual development and development across the history and future of the species	Charles Darwin, David Buss, Konrad Lorenz, Robert Sapolsky

https://lumenlearning.h5p.com/content/1290798217292106038/embed

https://lumenlearning.h5p.com/content/1290798196103649038/embed

Candela Citations

CC licensed content, Original

- Comparing Contemporary Approaches. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...ry-approaches/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Comparing and Evaluating Lifespan Theories. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...span-theories/. **License**: CC BY: Attribution

This page titled 3.10: Comparing Contemporary Approaches is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

accommodation: a term developed by psychologist Jean Piaget to describe what occurs when new information or experiences cause you to modify your existing schemas

assimilation: a cognitive process that manages how we take in new information and incorporate that new information into our existing knowledge

behavioral approach: the approach that suggests that the keys to understanding development are observable behavior and outside stimuli in the environment

bioecological model: the perspective suggesting that multiple levels of the environment interact with biological potential to influence development

chronosystem: the environmental events and transitions that occur throughout a child's life, including any socio-historical events

classical conditioning: a type of learning in which an organism responds in a particular way to a neutral stimulus that normally does not bring about that type of response

cognitive approach: an approach that focuses on the process that allows people to know, understand and think about the world

concrete operational stage: the stage in which children can think logically about real (concrete) events, have a firm grasp on the use of numbers and start to employ memory strategies, lasts from about 7 to 11 years old

conservation: the idea that even if you change the appearance of something, it is still equal in size as long as nothing has been removed or added, usually develops during the concrete operational stage

contextual approach: a theory that considers the relationship between individuals and their physical, cognitive, and social worlds

ecological systems theory: Urie Bronfenbrenner's theory stressing the importance of studying a child in the context of multiple environments, organized into five levels of external influence: microsystem, mesosystem, exosystem, macrosystem, and chronosystem

exosystem: the larger contexts of the community, including the values, history, and economy

evolutionary psychology: a field of study that seeks to identify behavior that is a result of our genetic inheritance from our ancestors

formal operational stage: the fourth, and last, stage in Piaget's theory and lasts from about age 11 to adulthood. Children in the formal operational stage can deal with abstract ideas and hypothetical situations

humanism: a psychological theory that emphasizes an individual's inherent drive towards self-actualization and contends that people have a natural capacity to make decisions about their lives and control their own behavior

hypothesis: a testable prediction

information-processing approach: an alternative to Piagetian approaches, a model that seeks to identify the ways individual take in, use, and store information

law of effect: behavior that is followed by consequences satisfying to the organism will be repeated, and behaviors that are followed by unpleasant consequences will be discouraged

macrosystem: cultural elements such as global economic conditions, war, technological trends, values, philosophies, and a society's responses to the global community which impact a community

Maslow's hierarchy of needs: a motivational theory in psychology comprising a five-tier model of human needs, often depicted as hierarchical levels within a pyramid. Needs lower down in the hierarchy must be satisfied before individuals are motivated to attend to needs higher up

mesosystem: larger organizational structures such as school, the family, or religion

microsystem: immediate surrounds including those who have direct, significant contact with the person, such as parents or siblings

neurosis: a tendency to experience negative emotions

operant conditioning: a form of learning in which a voluntary response is strengthened or weekend by its association with positive or negative consequences

Piaget theory of cognitive development: a description of cognitive development as four distinct stages in children: sensorimotor, preoperational, concrete, and formal

psychodynamic approach: the perspective that behavior is motivated by inner forces, memories, and conflicts that are generally beyond people's awareness and control

psychosocial theory: the theory that emphasizes that social relationships that are important at each stage of personality development

reciprocal determinism: the interplay between our personality and the way we interpret events and how they influence us

reversibility: objects can be changed and then returned to their original form or condition, typically observed during the concrete operational stage

scaffolding: a process in which adults or capable peers model or demonstrate how to solve a problem, and then step back, offering support as needed

schemas: an existing framework for an object or concept

self-actualization: according to humanistic theory, the realizing of one's full potential can include creative expression, a quest for spiritual enlightenment, the pursuit of knowledge, or the desire to contribute to society. For Maslow, it is a state of self-fulfillment in which people achieve their highest potential in their own unique way

social learning theory: learning by observing the behavior of another person, called a model

sociocultural theory: Vygotsky's theory that emphasizes how cognitive development proceeds as a result of social interactions between members of a culture

theory: a well-developed set of ideas that propose an explanation for observed phenomena that can be used to make predictions about future observations

theory-of-mind (TOM): explains how children come to understand that people have thoughts, feelings, and beliefs that are different from their own, develops during the preoperational stage

zone of proximal development (ZPD): the difference between what a learner can do without help, and what they can do with help

This page titled 3.11: Glossary is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

4: PHYSICAL DEVELOPMENT DURING ADOLESCENCE

Learning Objectives

- Describe the physical changes that occur during puberty
- Identify ways in which the timing of puberty impacts other aspects of development
- Describe the changes and risks associated with sexual development
- Identify health concerns during adolescence
- Compare the symptoms and risks of eating disorders

Physical changes of puberty mark the onset of adolescence (Lerner & Steinberg, 2009). For both boys and girls, these changes include a growth spurt in height, growth of pubic and underarm hair, and skin changes (e.g., pimples). Boys also experience growth in facial hair and a deepening of their voice. Girls experience breast development and begin menstruating. These pubertal changes are driven by hormones, particularly an increase in testosterone for boys and estrogen for girls. The physical changes that occur during adolescence are greater than those of any other time of life, with the exception of infancy. In some ways, however, the changes in adolescence are more dramatic than those that occur in infancy—unlike infants, adolescents are aware of the changes that are taking place and of what the changes mean. In this chapter, you will learn about the pubertal changes in body size, proportions, and sexual maturity, the social and emotional attitudes and reactions toward puberty, and some of the health concerns during adolescence.

4.1: Puberty Begins

4.2: Sexual Development

4.3: Health Concerns during Adolescence

4.4: Glossary

This page titled 4: Physical Development during Adolescence is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

4.1: Puberty Begins

Puberty is the period of rapid growth and sexual development that begins in adolescence and starts at some point between ages 8 and 14. While the sequence of physical changes in puberty is predictable, the onset and pace of puberty vary widely. Every person's individual timetable for puberty is different and is primarily influenced by heredity; however, environmental factors—such as diet and exercise—also exert some influence.

Adolescence has evolved historically, with evidence indicating that this stage is lengthening as individuals start puberty earlier and transition to adulthood later than in the past. Puberty today begins, on average, at age 10–11 years for girls and 11–12 years for boys. This average age of onset has decreased gradually over time since the 19th century by 3–4 months per decade, which has been attributed to a range of factors including better nutrition, obesity, increased father absence, and other environmental factors (Steinberg, 2013). Completion of formal education, financial independence from parents, marriage, and parenthood have all been markers of the end of adolescence and beginning of adulthood, and all of these transitions happen, on average, later now than in the past. In fact, the prolonging of adolescence has prompted the introduction of a new developmental period called emerging adulthood that captures these developmental changes out of adolescence and into adulthood, occurring approximately from ages 18 to 29 (Arnett, 2000).

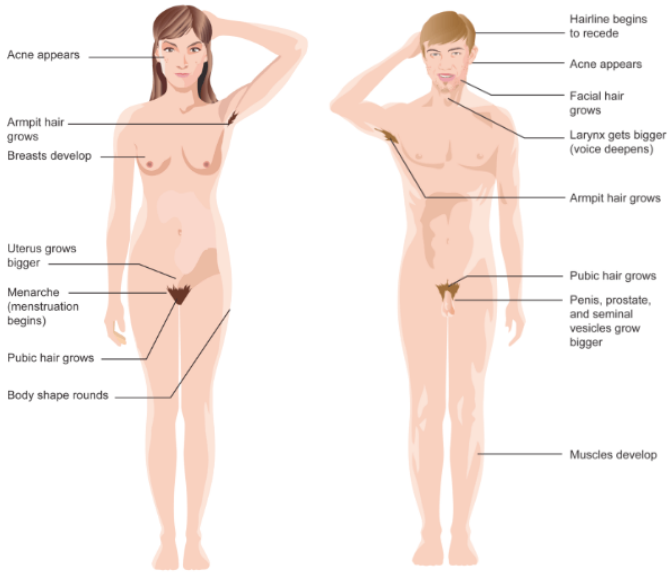


Figure 4.2.1. Major physical changes during puberty.

Hormonal Changes

Puberty involves distinctive physiological changes in an individual's height, weight, body composition, and circulatory and respiratory systems, and during this time, both the adrenal glands and sex glands mature. These changes are primarily influenced by hormonal activity. Many hormones contribute to the beginning of puberty, but most notably, a significant rush of **estrogen** for girls and **testosterone** for boys. Hormones play an *organizational role* (priming the body to behave in a certain way once puberty begins) and an *activational role* (triggering certain behavioral and physical changes). During puberty, the adolescent's hormonal balance shifts sharply towards an adult state; the process is triggered by the pituitary gland, which secretes a surge of hormonal agents into the bloodstream and initiates a chain reaction.

Puberty occurs over two distinct phases, and the first phase, **adrenarche**, begins at 6 to 8 years of age and involves increased production of adrenal androgens that contribute to a number of pubertal changes—such as skeletal growth. The second phase of puberty, **gonadarche**, begins several years later and involves increased production of hormones governing physical and sexual maturation.

Sexual Maturation

During puberty, primary and secondary sex characteristics develop and mature. **Primary sex characteristics** are organs specifically needed for reproduction—the uterus and ovaries in females and testes in males. **Secondary sex characteristics** are physical signs of sexual maturation that do not directly involve sex organs, such as the development of breasts and hips in girls, and growth of facial hair and a deepened voice in boys. Both sexes experience the development of pubic and underarm hair, as well as increased development of sweat glands.

The male and female **gonads** are activated by the surge of the hormones discussed earlier, which puts them into a state of rapid growth and development. The testes primarily release testosterone, and the ovaries release estrogen; the production of these hormones increases gradually until sexual maturation is met.

For girls, observable changes begin with nipple growth and pubic hair. Then the body increases in height while fat forms, particularly on the breasts and hips. The first menstrual period (**menarche**) is followed by more growth, which is usually completed by four years after the first menstrual period began. Girls experience menarche usually around 12–13 years old. For boys, the usual sequence is growth of the testes, initial pubic-hair growth, growth of the penis, first ejaculation of seminal fluid (**spermarche**), appearance of facial hair, a peak growth spurt, deepening of the voice, and final pubic-hair growth. (Herman-Giddens et al., 2012). Boys experience spermarche, the first ejaculation, around 13–14 years old.

Physical Growth: The Growth Spurt

During puberty, both sexes experience a rapid increase in height and weight (referred to as a **growth spurt**) over about 2-3 years resulting from the simultaneous release of growth hormones, thyroid hormones, and androgens. Males experience their growth spurt about two years later than females. For girls, the growth spurt begins between 8 and 13 years old (average 10-11), with adult height reached between 10 and 16 years old. Boys begin their growth spurt slightly later, usually between 10 and 16 years old (average 12-13), and reach their adult height between 13 and 17 years old. Both nature (i.e., genes) and nurture (e.g., nutrition, medications, and medical conditions) can influence both height and weight.

Before puberty, there are nearly no differences between males and females in the distribution of fat and muscle. During puberty, males grow muscle much faster than females, and females experience a higher increase in body fat, and bones become harder and more brittle. An adolescent's heart and lungs increase in both size and capacity during puberty; these changes contribute to increased strength and tolerance for exercise.

https://assessments.lumenlearning.co...essments/16607

https://assessments.lumenlearning.co...essments/16608

Reactions Toward Puberty and Physical Development

The accelerated growth in different body parts happens at different times, but for all adolescents, it has a fairly regular sequence. The first places to grow are the extremities (head, hands, and feet), followed by the arms and legs, and later the torso and shoulders. This non-uniform growth is one reason why an adolescent body may seem out of proportion. Additionally, because rates of physical development vary widely among teenagers, puberty can be a source of pride or embarrassment.

Most adolescents want nothing more than to fit in and not be distinguished from their peers in any way, shape, or form (Mendle, 2015). So when a child develops earlier or later than his or her peers, there can be long-lasting effects on mental health. Simply put, beginning puberty earlier than peers presents significant challenges, particularly for girls. The picture for early-developing boys isn't as clear, but evidence suggests that they, too, eventually might suffer ill effects from maturing ahead of their peers. The biggest challenges for boys, however, seem to be more related to late development.

Early maturing boys tend to be stronger, taller, and more athletic than their later maturing peers. They are usually more popular, confident, and independent, but they are also at a greater risk for substance abuse and early sexual activity (Flannery, Rowe, & Gulley, 1993; Kaltiala-Heino, Rimpela, Rissanen, & Rantanen, 2001). Additionally, more recent research found that while early-maturing boys initially had lower levels of depression than later-maturing boys, over time, they showed signs of increased anxiety, negative self-image, and interpersonal stress. (Rudolph, Troop-Gordon, Lambert, & Natsuaki, 2014).

Early maturing girls may be teased or overtly admired, which can cause them to feel self-conscious about their developing bodies.

These girls are at increased risk of a range of psychosocial problems, including depression, substance use, and early sexual behavior (Graber, 2013).These girls are also at a higher risk for eating disorders, which we will discuss in more detail later in this module (Ge, Conger, & Elder, 2001; Graber, Lewinsohn, Seeley, & Brooks-Gunn, 1997; Striegel-Moore & Cachelin, 1999).

Late maturing boys and girls (i.e., they develop more slowly than their peers) may feel self-conscious about their lack of physical development. Negative feelings are particularly a problem for late maturing boys, who are at a higher risk for depression and conflict with parents (Graber et al., 1997) and more likely to be bullied (Pollack & Shuster, 2000).

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 4.2.1. Development in Adolescence provides an overview of physical changes during adolescence and psychosocial impacts.

https://assessments.lumenlearning.co...essments/16609

Candela Citations

CC licensed content, Original

- Puberty Begins. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...puberty-begins. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Lifespan Development. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...pandevelopment. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Specific attribution

- Development in Adolescence. **Authored by**: Brooke Miller. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/DWKWjpVsGng. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

This page titled 4.1: Puberty Begins is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

4.2: Sexual Development

Developing sexually is an expected and natural part of growing into adulthood. Healthy sexual development involves more than sexual behavior. It is the combination of physical sexual maturation (puberty, age-appropriate sexual behaviors), the formation of a positive sexual identity, and a sense of sexual well-being (discussed more in-depth later in this module). During adolescence, teens strive to become comfortable with their changing bodies and to make healthy, safe decisions about which sexual activities, if any, they wish to engage in.

Earlier in the physical development section, we discussed **primary and secondary sex characteristics**. During puberty, every primary sex organ (the ovaries, uterus, penis, and testes) increases dramatically in size and matures in function. During puberty, reproduction becomes possible. Simultaneously, secondary sex characteristics develop. These characteristics are not required for reproduction, but they do signify masculinity and femininity. At birth, boys and girls have similar body shapes, but during puberty, males widen at the shoulders, and females widen at the hips and develop breasts (examples of secondary sex characteristics). Sexual development is impacted by a dynamic mixture of physical and cognitive change, coupled with social expectations. With physical maturation, adolescents may become alternately fascinated with and chagrined by their changing bodies, and often compare themselves to the development they notice in their peers or see in the media. For example, many adolescent girls focus on their breast development, hoping their breasts will conform to an ideal body image.

As sex hormones cause biological changes, they also affect the brain and trigger sexual thoughts. Culture, however, shapes actual sexual behaviors. Emotions regarding sexual experience, like the rest of puberty, are strongly influenced by cultural norms regarding what is expected at what age, with peers being the most influential. Simply put, the most important influence on adolescents' sexual activity is not their bodies, but their close friends, who have more influence than do sex or ethnic group norms (van de Bongardt et al., 2015).

Sexual interest and interaction are a natural part of adolescence. Sexual fantasy and **masturbation** episodes increase between the ages of 10 and 13. Masturbation is very ordinary—even young children have been known to engage in this behavior. As the bodies of children mature, powerful sexual feelings begin to develop, and masturbation helps release sexual tension. For adolescents, masturbation is a common way to explore their erotic potential, and this behavior can continue throughout adult life.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 4.3.1. "What Happens When?" Child and Adolescent Sexual Development explains major milestones in sexual development throughout childhood and adolescence, as well as how to support kids during these stages.

Sexual Interactions

Many early social interactions tend to be nonsexual—text messaging, phone calls, email—but by the age of 12 or 13, some young people may pair off and begin dating and experimenting with kissing, touching, and other physical contact, such as oral sex. The vast majority of young adolescents are not prepared emotionally or physically for oral sex and sexual intercourse. If adolescents this young do have sex, they are highly vulnerable to sexual and emotional abuse, **sexually transmitted infections (STIs)**, HIV, and early pregnancy. For STI's in particular, adolescents are slower to recognize symptoms, tell partners, and get medical treatment, which puts them at risk of infertility and even death.

Adolescents ages 14 to 16 understand the consequences of unprotected sex and teen parenthood, if properly taught, but cognitively they may lack the skills to integrate this knowledge into everyday situations or consistently to act responsibly in the heat of the moment. By the age of 17, many adolescents have willingly experienced sexual intercourse. Teens who have early

sexual intercourse report strong peer pressure as a reason behind their decision. Some adolescents are just curious about sex and want to experience it.

Becoming a sexually healthy adult is a developmental task of adolescence that requires integrating psychological, physical, cultural, spiritual, societal, and educational factors. It is particularly important to understand the adolescent in terms of his or her physical, emotional, and cognitive stage. Additionally, healthy adult relationships are more likely to develop when adolescent impulses are not shamed or feared. Guidance is certainly needed, but acknowledging that adolescent sexuality development is both normal and positive would allow for more open communication so adolescents can be more receptive to education concerning the risks (Tolman & McClelland, 2011).

Adolescents are receptive to their culture, to the models they see at home, in school, and in the mass media. These observations influence moral reasoning and moral behavior, which we discuss in more detail later in this module. Decisions regarding sexual behavior are influenced by teens' ability to think and reason, their values, and their educational experience. Helping adolescents recognize all aspects of sexual development encourages them to make informed and healthy decisions about sexual matters.

Teenage Sexual Activity Trends

Teenagers are much more sexually active today than they were before the sexual revolution of the 1960s and 70s. About 43 percent of never-married teens ages 15–19 of both sexes have had sexual intercourse (Martinez et al., 2011); this percentage represents a drop from its highest point, in 1988, of 51 percent for females and of 60 percent for males. About three-fourths of girls in today's sexually experienced group and 85 percent of boys in this group use contraception, most often a condom, the first time they ever have sex. In their most recent act of sexual intercourse, almost 86 percent of girls and 93 percent of boys used contraception, again most often a condom.

If 43 percent of teens have had sexual intercourse, that means the majority of teens, 57 percent, have never had intercourse. It is interesting to examine their reasons. The table below identifies the main reason given for never having sexual intercourse. The top reason for both sexes is religion and morals, followed by concern about a possible pregnancy and not having found the right person with whom to have sex (Martinez et al., 2011).

Table 4.3.1. Main Reason Given for Never Having Sexual Intercourse, Ages 15–19 (%)

	Females	Males
Against religion or morals	38	31
Don't want to get (a female) pregnant	19	25
Haven't found the right person yet	17	21
Don't want to get an STI	7	10
In a relationship, but waiting for the right time	7	5
Other reason	12	8

https://assessments.lumenlearning.co...essments/16611

The Problem of Teenage Pregnancy

Most teenage pregnancies and births are unplanned and are part of a more general problem for all women in their childbearing years. Almost 700,000 unplanned teenage pregnancies occur annually; another 50,000 teenage pregnancies are planned. These 750,000 teenage pregnancies annually result in some 400,000 births (Kost, Henshaw, & Carlin, 2010). Altogether, about 18 percent of women, or one of every six females, become teen mothers, and in several southern and southwestern states, this percentage is as high as 25–30 percent (Perper & Manlove, 2009).

The birth rate for females aged 15–19 in 2009 was 39.1 births per 1,000 females. This rate represented a substantial decline from the early 1990s when the rate reached a peak of almost 60. However, it was still twice as high as Canada's rate and much higher yet than other Western democracies (Figure 4.3.1).

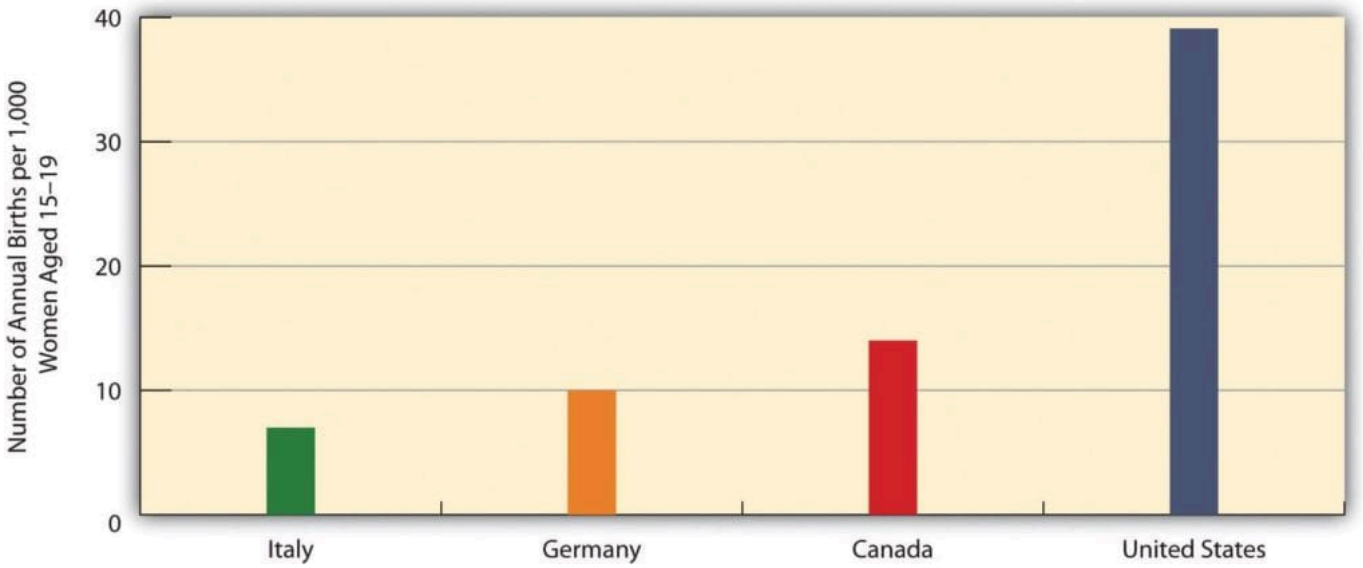


Figure 4.3.1. Teenage Birth Rates in Selected Western Democracies

Although teenaged pregnancies (and births from these pregnancies) are far from the majority of all pregnancies, unplanned or planned, they pose special problems (American College of Obstetricians and Gynecologists, 2011; Anderson, 2011). On the individual level, pregnant teenagers are more at risk than older pregnant women for high blood pressure and anemia, and they are also more likely to experience early labor, premature birth, and low birth weight. In addition, because teenagers are more likely than adults to have STIs, pregnant teenagers are more likely than older pregnant women to have an STI while they are pregnant, either because they already had an STI when they conceived or because they contract an STI from having sex during pregnancy.

Many pregnant teenagers decide to drop out of school. If they stay in school, they often must deal with the embarrassment of being pregnant, and the physical and emotional difficulties accompanying their teenage pregnancy can affect their school performance. Once the baby is born, child care typically becomes an enormous problem, whether or not the new mother is in school. Because pregnant teenagers disproportionately come from families that are poor or near-poor, they have few financial resources and often have weak social support networks, either before or after the baby is born (Andrews & Moore, 2011).

At the societal level, teenage pregnancy and motherhood are very costly in at least two important respects. First, because pregnancy and childbirth complications are more common among teenagers, their health-care expenses during and after pregnancy and childbirth are often higher than the expenses incurred by older women. Medicaid, the federal government's national health plan for poor families, often covers much of these expenses, and the premiums that private health insurance companies charge are higher than otherwise because of their expenses when they insure the families of pregnant teenagers.

Second, the children of teenage mothers are at risk for several kinds of behavioral and developmental problems. Teenage parents may be unprepared emotionally or practically to raise a child. Children of teen parents may receive less cognitive stimulation and proper emotional support. In addition, the stress they experience as young parents put them at risk of neglecting or abusing their children. Teenage parents also tend to come from low-income families and continue to live in poverty or near poverty after they become mothers compounds all these problems. For all these reasons, the children of teenage mothers are at greater risk for several kinds of issues. These problems include impaired neurological development, behavioral problems, poor school performance, and chronic health problems.

Reducing Teenage Pregnancy

In an effort to reduce teenage pregnancies, two approaches have been used: (1) Emphasize abstinence, convincing teens to hold off on having sex until adulthood or marriage, and (2) comprehensive sex education, including teaching the effective use of contraception if they do have sex. Most sexual behavior researchers believe that pleas for abstinence, as well as sex education programs that focus solely or almost entirely on abstinence, do not help to reduce teen sex and pregnancy (Ball & Moore, 2008).

Comprehensive sex education is based on the strategy of harm reduction. A harm reduction approach recognizes that because certain types of harmful behavior are inevitable, our society should do its best to minimize the various kinds of harm that these

various behaviors generate. In regard to teenage sex and pregnancy, a harm reduction approach has two goals: (1) to help reduce the risk for pregnancy among sexually active teens and (2) to help teenage parents and their children.

To achieve the first goal, parents, sex education classes, family planning clinics, youth development programs, and other parties must continue to emphasize the importance of waiting to have sex but also the need for teenagers to use contraception if they are sexually active. In addition, effective contraception (birth control pills, other hormonal control, and even condoms, which protect against STIs) must be made available for teenagers at little or no cost. Studies indicate that these two contraception strategies do not lead to more teenage sex, and they also indicate that consistent contraceptive use dramatically reduces the risk of teenage pregnancy. As one writer has summarized these studies' conclusions, "Contraceptives no more cause sex than umbrellas cause rain...When contraception is unavailable, the likely consequences is not less sex, but more pregnancy" (Kristof, 2011, p. A31).

In this regard, a recent report of the Guttmacher Institute called contraception a "proven, cost-effective strategy" (Gold, 2011, p. 7). It added, "Contraception is almost universally accepted as a way to reduce the risk of unintended pregnancy...Contraceptive use reduces the risk of unintended pregnancy significantly, and consistent contraceptive use virtually eliminates it." The report noted that government-funded family planning agencies prevent 2 million unintended pregnancies annually by providing contraception to 9 million young and low-income women each year. Because most of the women who would have these prevented pregnancies would be eligible for Medicaid, the Medicaid savings from these prevented pregnancies amount to about $7 billion annually. An expansion of family planning services would almost certainly be an effective strategy for reducing teenage pregnancies as well as unplanned pregnancies among older women.

Another strategy to prevent teenage pregnancy involves the use of early childhood intervention (ECI) programs. Many such programs exist, but they generally include visits by social workers, nurses, and other professionals to the homes of children who are at risk for neurological, emotional, and/or behavioral problems during their first several years and also as they grow into adolescents and young adults (Kahn & Moore, 2010). It might sound like a stereotype, but these children are disproportionately born to single, teenage mothers and/or to slightly older parents who live in poverty or near poverty. Long-term evaluation studies show that the best of these programs reduce the likelihood that the very young children they help will become pregnant or have children of their own after they become teenagers (Ball & Moore, 2008). In effect, assisting young children to today helps prevent teenage pregnancy tomorrow.

The second prong to this harm reduction strategy targets teenage parents and their children. Because teen pregnancies occur despite the best prevention efforts, the second goal of a harm reduction approach is to help teens during their pregnancy and after childbirth. This strategy has the immediate aim of providing practical and emotional support for these very young mothers; it also has the longer-term goals of reducing repeat pregnancies and births and of preventing developmental and behavior problems among their children.

To achieve these aims, Early Childhood Intervention programs have again been shown to be helpful (Ball & Moore, 2008). Another type of program to help teen mothers involves the use of second-chance homes, which are maternity group homes for unmarried teen mothers (Andrews & Moore, 2011). One of the many sad facts of teenage motherhood is that teen mothers often have nowhere to live. A teen mother's parent(s) may refuse to let her and her infant live with them, either because they are angry at her pregnancy or because they simply do not have the room or financial means to house and take care of a baby. Or a pregnant teen may decide to leave her parents' home because of the parents' anger or because they refuse to let her continue seeing the child's father. In another possibility, a teen mother may begin living with the father, but these unions are typically unstable and often end, again leaving her and her child without a home. As well, many teen mothers were runaways from home before they became pregnant or were living in foster care. Because of all these situations, many teen mothers find themselves without a place to live.

In second-chance homes (which, depending on the program, are in reality one large house, a set of apartments, or a network of houses), mothers and children (as well as pregnant teens) receive shelter and food, but they also receive essential services, such as childrearing help, educational and vocational counseling and training, family planning counseling, and parenting classes. Although rigorous evaluation studies do not yet exist on the effectiveness of second-chance homes, they do seem to offer a valuable resource for teen mothers and their children (Andrews & Moore, 2011).

A final strategy for addressing the problem of teenage sex and pregnancy is to address a more general societal condition that helps produce teenage sex and pregnancy. This condition is poverty. As noted earlier, children who grow up in poor families and in disadvantaged neighborhoods—those with high rates of poverty, unemployment, high school dropouts, and so forth—are more likely to have sex earlier as teens and to become pregnant (Harding, 2003; Scott, Steward-Streng, Barry, & Manlove, 2011).

Sexually Transmitted Infections

In addition to pregnancy and birth, another problem associated with teenage sexual activity is the transmission of sexually transmitted infections (STIs). This is a problem during the teenage years, but it is even more of a problem during young adulthood, when sexual activity is higher than during adolescence (Wildsmith, Schelar, Peterson, & Manlove, 2010). The STI rate in the United States is higher than in most other Western democracies. Almost 19 million new cases of STIs are diagnosed annually, and more than 65 million Americans have an incurable STI, such as herpes. Although teens and young adults ages 15–24 compose only one-fourth of sexually active people, they account for one-half of all new STIs. Despite this fact, most young adults who test positive for an STI did not believe they were at risk of getting an STI (Wildsmith et al., 2010).

In any one year, 15 percent of young adults ages 18 and 26 have an STI. This figure masks a significant gender difference: 20 percent of young women have had an STI in the past year, compared to 10 percent of young men. It also masks important racial/ethnic differences: 34 percent of young African Americans have had an STI in the past year, compared to 10 percent of Asians, 15 percent of Hispanics, and 10 percent of whites.

Three types of sexual behaviors increase the risk of transmitting or contracting an STI: having sex with at least three partners during the past year, having a sex partner with a known STI, and not using a condom regularly. About 17 percent of sexually active young adults have had at least three partners during the past year, and 8 percent have had a partner with a known STI. Three-fourths of unmarried sexually active young adults do not use a condom regularly. Combining all these risk factors, 39 percent have engaged in one risk factor in the past year, 14 percent have engaged in at least two risk factors, and the remainder, 48 percent, have engaged in no risk factors (Wildsmith et al., 2010).

Think About It

1. Imagine that you became a parent at age 17. How would your life have been different from what it is now?
2. Many sexually active teenagers do not use contraception regularly. Why do you think they do not use it more often?

Candela Citations

CC licensed content, Original

- Sexual Development. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...l-development/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Teen Sex and Pregnancy. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/su...-pregnancy/%20. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

This page titled 4.2: Sexual Development is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

4.3: Health Concerns during Adolescence

Adequate adolescent nutrition is necessary for optimal growth and development. Dietary choices and habits established during adolescence greatly influence future health, yet many studies report that teens consume few fruits and vegetables and are not receiving the calcium, iron, vitamins, or minerals necessary for healthy development

One of the reasons for poor nutrition is anxiety about **body image,** which is a person's idea of how his or her body looks. The way adolescents feel about their bodies can affect the way they feel about themselves as a whole. Few adolescents welcome their sudden weight increase, so they may adjust their eating habits to lose weight. Adding to the rapid physical changes, they are simultaneously bombarded by messages, and sometimes teasing, related to body image, appearance, attractiveness, weight, and eating that they encounter in the media, at home, and from their friends/peers (both in-person and via social media).

Much research has been conducted on the psychological ramifications of body image on adolescents. Modern-day teenagers are exposed to more media on a daily basis than any generation before them. Recent studies have indicated that the average teenager watches roughly 1500 hours of television per year, and 70% use social media multiple times a day. As such, adolescents are exposed to many representations of ideal, societal beauty. The concept of a person being unhappy with their own image or appearance has been defined as "**body dissatisfaction**." In teenagers, body dissatisfaction is often associated with body mass, low self-esteem, and atypical eating patterns. Scholars continue to debate the effects of media on body dissatisfaction in teens. What we do know is that two-thirds of U.S. high school girls are trying to lose weight, and one-third think they are overweight, while only one-sixth are actually overweight (MMWR, June 10, 2016).

https://assessments.lumenlearning.co...essments/16612

Obesity

Although at the peak of physical health, a concern for early adults is the current rate of obesity. Results from the 2015 National Center for Health Statistics indicate that an estimated 70.7% of U.S. adults aged 20 and over are overweight, and 37.9% are obese (CDC, 2015b). **Body mass index (BMI)**, *expressed as weight in kilograms divided by height in meters squared (kg/m2)*, is commonly used to classify overweight (BMI 25.0–29.9), obesity (BMI greater than or equal to 30.0), and extreme obesity (BMI greater than or equal to 40.0). The 2015 statistics show an increase from the 2013-2014 statistics that indicated that an estimated 35.1% were obese, and 6.4% extremely obese (Fryar, Carroll, & Ogden, 2014). In 2003-2004, 32% of American adults were identified as obese. The CDC also indicated that one's 20s are the prime time to gain weight as the average person gains one to two pounds per year from early adulthood into middle adulthood. The average man in his 20s weighs around 185 pounds and by his 30s, weighs approximately 200 pounds. The average American woman weighs 162 pounds in her 20s and 170 pounds in her 30s.

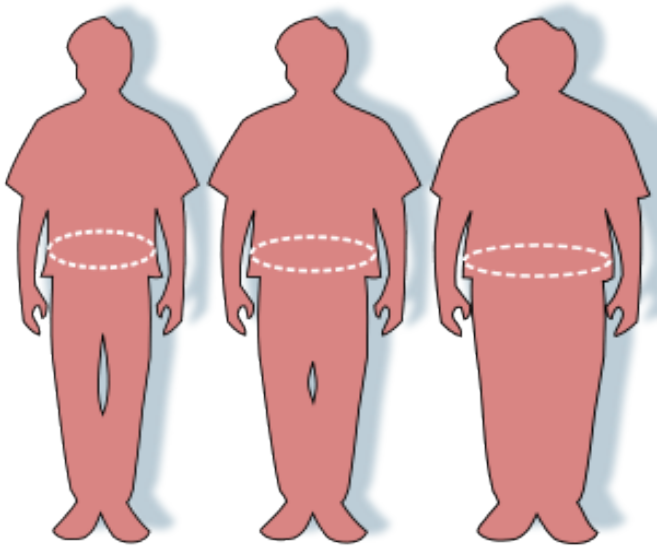


Figure 4.4.1. Waist circumference.

The American obesity crisis is also reflected worldwide (Wighton, 2016). In 2014, global obesity rates for men were measured at 10.8% and among women 14.9%. This translates to 266 million obese men and 375 million obese women in the world, and more people were identified as obese than underweight. Although obesity is seen throughout the world, more obese men and women live in China and the USA than in any other country. Figure 4.3 illustrates how waist circumference is also used as a measure of obesity. Figure 4.4 demonstrates the percentage of growth for males and females identified as obese between 1960 and 2012.

Causes of Obesity

According to the Centers for Disease Control and Prevention (CDC) (2016), obesity originates from a complex set of contributing factors, including one's environment, behavior, and genetics. Societal factors include culture, education, food marketing and promotion, the quality of food, and the physical activity environment available. Behaviors leading to obesity include diet, the amount of physical activity, and medication use. Lastly, there does not appear to be a single gene responsible for obesity. Rather, research has identified variants in several genes that may contribute to obesity by increasing hunger and food intake. Another genetic explanation is the mismatch between today's environment and "energy-thrifty genes" that multiplied in the distant past when food sources were unpredictable. The genes that helped our ancestors survive occasional famines are now being challenged by environments in which food is plentiful all the time. Overall, obesity most likely results from complex interactions among the environment and multiple genes.

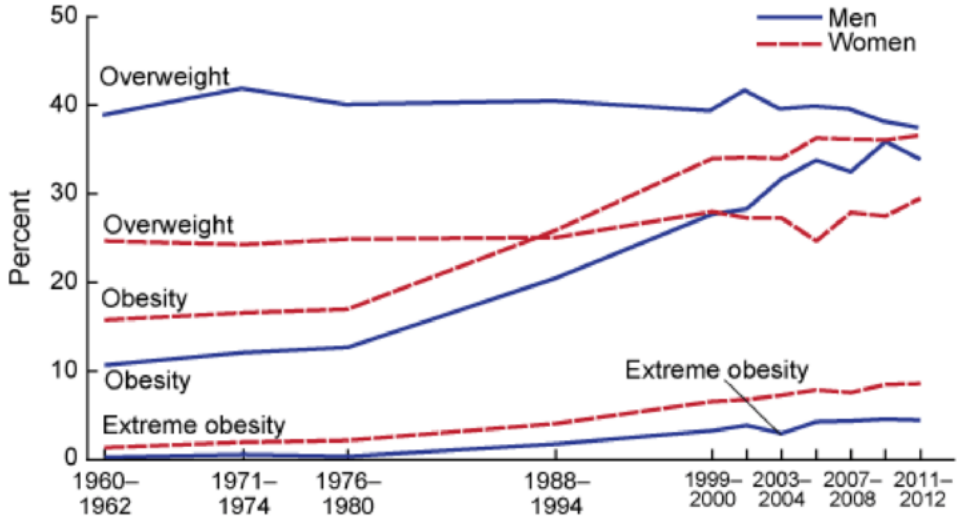


Figure 4.4.2. Adult obesity trends *Notes*: Age-adjusted by the direct method to the year 2000 U.S. Census Bureau estimates using age groups 20–39, 40–59, and 60–74. Pregnant females were excluded. Overweight is body mass index (BMI) of 25 or greater but less 30; obesity is BMI greater than or equal to 30; and extreme obesity is BMI greater than or equal to 40. SOURCE: CDC/NCHS, National Health Examination Survey 1960–1962; and National Health and Nutrition Examination Surveys 1971–1974; 1976–1980; 1988–1994; 1999–2000, 2001–2002, 2003–2004, 2005–2006, 2007–2008, 2009–2010, and 2011–2012.

Obesity Health Consequences

Obesity is considered to be one of the leading causes of death in the United States and worldwide. Additionally, the medical care costs of obesity in the United States were estimated to be $147 billion in 2008. According to the CDC (2016) compared to those with a normal or healthy weight, people who are obese are at increased risk for many serious diseases and health conditions, including:

- All-causes of death (mortality)
- High blood pressure (Hypertension)
- High LDL cholesterol, low HDL cholesterol, or high levels of triglycerides (Dyslipidemia)
- Type 2 diabetes

- Coronary heart disease
- Stroke
- Gallbladder disease
- Osteoarthritis (a breakdown of cartilage and bone within a joint)
- Sleep apnea and breathing problems
- Some cancers (endometrial, breast, colon, kidney, gallbladder, and liver)
- Low quality of life
- Mental illness such as clinical depression, anxiety, and other mental disorders
- Body pain and difficulty with physical functioning

Eating Disorders

Dissatisfaction with body image can explain why many teens, mostly girls, eat erratically or ingest diet pills to lose weight and why boys may take steroids to increase their muscle mass. Although eating disorders can occur in children and adults, they frequently appear during the teen years or young adulthood (NIMH, 2019). Eating disorders affect both genders, although rates among women are 2½ times greater than among men. Similar to women who have eating disorders, some men also have a distorted sense of body image, including **muscle dysmorphia** or an extreme concern with becoming more muscular.

Because of the high mortality rate, researchers are looking into the etiology of the disorder and associated risk factors. Researchers are finding that eating disorders are caused by a complex interaction of genetic, biological, behavioral, psychological, and social factors (NIMH, 2019). Eating disorders appear to run in families, and researchers are working to identify DNA variations that are linked to the increased risk of developing eating disorders. Researchers have also found differences in patterns of brain activity in women with eating disorders in comparison with healthy women. The main criteria for the most common eating disorders: **anorexia nervosa**, **bulimia nervosa**, and **binge-eating disorder** are described in the Diagnostic and Statistical Manual of Mental Disorders-Fifth Edition, DSM-5 (American Psychiatric Association, 2013).

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 4.4.1. Eating Disorders explains the symptoms of anorexia nervosa, bulimia nervosa, and binge-eating disorder, as well as common treatments.

Anorexia Nervosa

People with anorexia nervosa may see themselves as overweight, even when they are dangerously underweight. People with anorexia nervosa typically weigh themselves repeatedly, severely restrict the amount of food they eat, often exercise excessively, and/or may force themselves to vomit or use laxatives to lose weight. Anorexia nervosa has the highest mortality rate of any mental disorder. While many people with this disorder die from complications associated with starvation, others die of suicide.

Symptoms of anorexia nervosa include:

- Extremely restricted eating
- Extreme thinness (emaciation)
- A relentless pursuit of thinness and unwillingness to maintain a normal or healthy weight
- Intense fear of gaining weight
- Distorted body image, a self-esteem that is heavily influenced by perceptions of body weight and shape, or a denial of the seriousness of low body weight

Other symptoms may develop over time, including:

- Thinning of the bones (osteopenia or osteoporosis)
- Mild anemia and muscle wasting and weakness
- Brittle hair and nails
- Dry and yellowish skin
- Growth of fine hair all over the body (lanugo)
- Severe constipation
- Low blood pressure slowed breathing and pulse
- Damage to the structure and function of the heart
- Brain damage
- Multiorgan failure
- Drop-in internal body temperature, causing a person to feel cold all the time
- Lethargy, sluggishness, or feeling tired all the time
- Infertility

For those suffering from anorexia, health consequences include an abnormally slow heart rate and low blood pressure, which increases the risk of heart failure. Additionally, there is a reduction in bone density (osteoporosis), muscle loss and weakness, severe dehydration, fainting, fatigue, and overall weakness. Anorexia nervosa has the highest mortality rate of any psychiatric disorder. Individuals with this disorder may die from complications associated with starvation, while others die of suicide. In women, suicide is much more common in those with anorexia than with most other mental disorders.

Bulimia Nervosa

People with bulimia nervosa have recurrent and frequent episodes of eating unusually large amounts of food and feeling a lack of control over these episodes. This binge-eating is followed by behavior that compensates for overeating such as forced vomiting, excessive use of laxatives or diuretics, fasting, excessive exercise, or a combination of these behaviors. People with bulimia nervosa may be slightly underweight, normal weight, or overweight.

Symptoms of bulimia nervosa include:

- Chronically inflamed and sore throat
- Swollen salivary glands in the neck and jaw area
- Worn tooth enamel and increasingly sensitive and decaying teeth as a result of exposure to stomach acid
- Acid reflux disorder and other gastrointestinal problems
- Intestinal distress and irritation from laxative abuse
- Severe dehydration from purging of fluids
- Electrolyte imbalance (too low or too high levels of sodium, calcium, potassium, and other minerals) which can lead to stroke or heart attack

The binging and purging cycle of bulimia can affect the digestive system and lead to electrolyte and chemical imbalances that can affect the heart and other major organs. Frequent vomiting can cause inflammation and possible rupture of the esophagus, as well as tooth decay and staining from stomach acids. Lastly, binge eating disorder results in similar health risks to obesity, including high blood pressure, high cholesterol levels, heart disease, Type II diabetes, and gall bladder disease (National Eating Disorders Association, 2016).

Binge-Eating Disorder

People with binge-eating disorder lose control over his or her eating. Unlike bulimia nervosa, periods of binge-eating are not followed by purging, excessive exercise, or fasting. As a result, people with binge-eating disorder often are overweight or obese. Binge-eating disorder is the most common eating disorder in the U.S.

Symptoms of binge-eating disorder include:

- Eating unusually large amounts of food in a specific amount of time, such as a 2-hour period
- Eating even when you're full or not hungry
- Eating fast during binge episodes
- Eating until you're uncomfortably full
- Eating alone or in secret to avoid embarrassment
- Feeling distressed, ashamed, or guilty about your eating

- Frequently dieting, possibly without weight loss

Eating Disorders Treatment

To treat eating disorders, getting adequate nutrition, and stopping inappropriate behaviors, such as purging, are the foundations of treatment. Treatment plans are tailored to individual needs and include medical care, nutritional counseling, medications (such as antidepressants), and individual, group, and/or family psychotherapy (NIMH, 2019). For example, the Maudsley Approach has parents of adolescents with anorexia nervosa be actively involved in their child's treatment, such as assuming responsibility for feeding their child. To eliminate binge eating and purging behaviors, cognitive behavioral therapy (CBT) assists sufferers by identifying distorted thinking patterns and changing inaccurate beliefs.

Links to Learning

Visit the National Eating Disorders Association to learn more about eating disorders.

Exercise and Sports

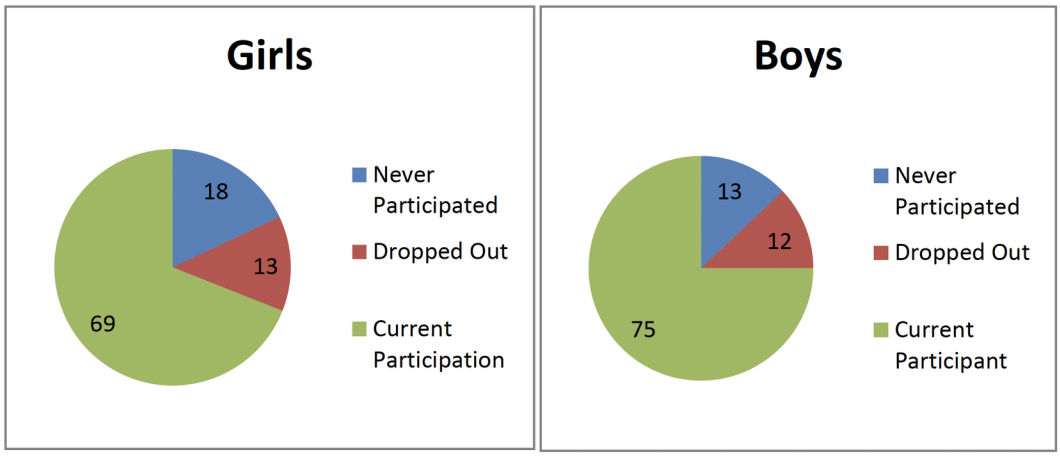
Middle childhood seems to be a great time to introduce children to organized sports, and in fact, many parents do. Nearly 3 million children play soccer in the United States (United States Youth Soccer, 2012). This activity promises to help children build social skills, improve athletically, and learn a sense of competition. However, it has been suggested that the emphasis on competition and athletic abilities can be counterproductive and lead children to grow tired of the game and want to quit. In many respects, it appears that children's activities are no longer children's activities once adults become involved and approach the games as adults rather than children. The U. S. Soccer Federation recently advised coaches to reduce the amount of drilling engaged in during practice and to allow children to play more freely and to choose their own positions. The hope is that this will build on their love of the game and foster their natural talents.

Sports are important for children. Children's participation in sports has been linked to:

- Higher levels of satisfaction with family and overall quality of life in children
- Improved physical and emotional development
- Better academic performance

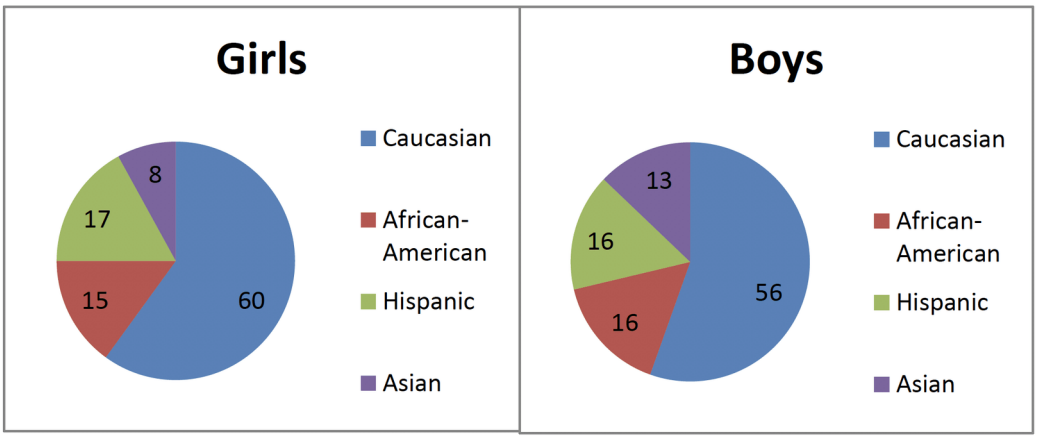
Yet, a study on children's sports in the United States (Sabo & Veliz, 2008) has found that gender, poverty, location, ethnicity, and disability can limit opportunities to engage in sports. Girls were more likely to have never participated in any type of sport (see Figure 4.4.3). They also found that fathers may not be providing their daughters as much support as they do their sons.

While boys rated their fathers as their biggest mentor who taught them the most about sports, girls rated coaches, and physical education teachers as their key mentors. Sabo and Veliz also found that children in suburban neighborhoods had much higher participation in sports than boys and girls living in rural or urban centers. In addition, Caucasian girls and boys participated in organized sports at higher rates than minority children (see Figure 4.4.4).



Total girls (n=1051). Total boys (n=1081)
t-test comparing gender and students who have never partcipated in sports. t=-3.038**, p=.002, df=2130

Figure 4.4.3. Participation in organized sports (%) by gender.



Girls – Caucasian (n=425); African-American (n=106); Hispanic (n=124); Asian (n=55)
Boys – Caucasian (n=435); African-American (n=127); Hispanic (n=123); Asian (n=99)

Figure 4.4.4. Participation in organized sports (%) by race and ethnicity.

Finally, Sabo and Veliz asked children who had dropped out of organized sports why they left. For both girls and boys, the number one answer was that it was no longer any fun (see Table 4.4.1). According to the Sports Policy and Research Collaborative (SPARC) (2013), almost 1 in 3 children drop out of organized sports, and while there are many factors involved in the decisions to drop out, one suggestion has been the lack of training that coaches of children's sports receive may be contributing to this attrition (Barnett, Smoll & Smith, 1992). Several studies have found that when coaches receive proper training, the drop-out rate is about 5% instead of the usual 30% (Fraser-Thomas, Côté, & Deakin, 2005; SPARC, 2013).

Table 4.4.1. Top reasons dropped out or stopped playing organized sports by gender

Table 5.1 Top Reasons Dropped Out or Stopped Playing Organized/Team Sports

Girls		Boys	
I was not having fun	38%	I was not having fun	39%
I wanted to focus more on studying and grades	36%	I had a health problem or injury	29%
I had a health problem or injury	27%	I wanted to focus more on studying and grades	26%
I wanted to focus more on other clubs or activities	22%	I did not like or get along with the coach	22%
I did not like or get along with the coach	18%	I wanted to focus more on other clubs or activities	18%
I did not like or get along with others on the team	16%	I did not like or get along with others on the team	16%
I was not a good enough player	15%	I was not a good enough player	15%
My family worried about me getting hurt or injured while playing sports	14%	My family worried about me getting hurt or injured while playing sports	12%

Source: Sabo, D., & Veliz, P. (2008). Go Out and Play: Youth Sports in America. East Meadows, NY: Women's Sports

Welcome to the World of E-Sports

The recent SPARC (2016) report on the "State of Play" in the United States highlights a disturbing trend. One in four children between the ages of 5 and 16 rate playing computer games with their friends as a form of exercise. In addition, **e-sports**, which as SPARC writes, is about as much a sport as poker, *involves children watching other children play video games*. over half of males, and about 20% of females, aged 12-19, say they are fans of e-sports.

Since 2008 there has also been a downward trend in the number of sports children are engaged in, despite a body of research evidence that suggests that specializing in only one activity can increase the chances of injury while playing multiple sports is protective (SPARC, 2016). A University of Wisconsin study found that 49% of athletes who specialized in a sport experienced an injury compared with 23% of those who played multiple sports (McGuine, 2016).

Physical Education

For many children, physical education in school is a key component in introducing children to sports. After years of schools cutting back on physical education programs, there has been a turnaround, prompted by concerns over childhood obesity and related health issues. Despite these changes, currently, only the state of Oregon and the District of Columbia meet PE guidelines of a minimum of 150 minutes per week of physical activity in elementary school and 225 minutes in middle school (SPARC, 2016).

Candela Citations

CC licensed content, Original

- Health Concerns during Adolescence. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...ng-adolescence. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Eating Disorders. **Provided by**: National Institute of Mental Health [NIMH]. **Retrieved from**: https://www.nimh.nih.gov/health/topi...rs/index.shtml. **License**: CC0: No Rights Reserved
- Lifespan Development. **Authored by**: Martha Lally and Suzanne Valentine-French. **Provided by**: College of Lake County Foundation . **Retrieved from**: http://dept.clcillinois.edu/psy/Life...evelopment.pdf. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

All rights reserved content

- Eating Disorders. **Provided by**: MedLecturesMadeEasy. **Retrieved from**: https://youtu.be/bD8KCcipGaY. **License**: *All Rights Reserved*

This page titled 4.3: Health Concerns during Adolescence is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

adolescent growth spurt: rapid increase in the individual's height and weight during puberty resulting from simultaneous release of growth hormones, thyroid hormones, and androgens. Males experience their growth spurt about two years later, on average, than females

adrenarche: an increase in the production of androgens by the adrenal cortex that usually occurs during the eighth or ninth year of life and typically peaks at around 10 to 14 years of age and is eventually involved in the development of pubic hair, body odor, skin oiliness, and acne

anorexia nervosa: an eating disorder characterized by self-starvation. Affected individuals voluntarily undereat and often overexercise, depriving their vital organs of nutrition. Anorexia can be fatal

binge-eating disorder: an eating disorder characterized by recurrent episodes of eating large quantities of food (often very quickly and to the point of discomfort); a feeling of a loss of control during the binge; experiencing shame, distress or guilt afterward; and not regularly using unhealthy compensatory measures (e.g., purging) to counter the binge eating. It is the most common eating disorder in the United States

body dissatisfaction: negative subjective evaluation of the weight and shape of one's own body, which may predict the onset, severity, and treatment outcomes of eating disorders

body image: a person's idea of how his or her body looks

bulimia nervosa: an eating disorder characterized by binge eating and subsequent purging, usually by induced vomiting and/or use of laxatives

estrogen: primary female sex hormone that is responsible for the development and regulation of the female reproductive system and secondary sex characteristics

gonad: a sex organ that produces gametes; specifically, a testicle or ovary

gonadarche: refers to the earliest gonadal changes of puberty. In response to pituitary gonadotropins, the ovaries in girls and the testes in boys begin to grow and increase the production of the sex steroids, especially estradiol and testosterone

masturbation: sexual self-stimulation, usually achieved by touching, stroking, or massaging the male or female genitals until this triggers an orgasm

menarche: a girl's first menstrual period, signaling that she has begun ovulation. Pregnancy is biologically possible, but ovulation and menstruation are often irregular for years after menarche

muscle dysmorphia: sometimes called "reverse anorexia" this is an obsession with being small and underdeveloped; extreme concern with becoming more muscular

primary sex characteristics: the parts of the body that are directly involved in reproduction, including the vagina, uterus, ovaries, testicles, and penis

puberty: the period of rapid growth and sexual development that begins in adolescence

secondary sex characteristics: physical traits that are not directly involved in reproduction but that indicate sexual maturity, such as a man's beard or a woman's breasts

sexually transmitted infections (STIs): diseases that are spread by sexual contact, including syphilis, gonorrhea, genital herpes, chlamydia, and HIV/AIDS

spermarche: a boy's first ejaculation of sperm. Erections can occur as early as infancy, but ejaculation signals sperm production. Spermarche may occur during sleep (nocturnal emission or "wet dream") or via direct stimulation

testosterone: the primary male sex hormone that plays a key role in the development of male reproductive tissues such as testes and prostate, as well as promoting secondary sexual characteristics such as increased muscle and bone mass, and the growth of body hair. Females also produce testosterone, but at a lower level than males

This page titled 4.4: Glossary is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

5: BRAIN DEVELOPMENT DURING ADOLESCENCE

Learning Objectives

- Describe brain development during adolescence
- Explain how brain changes impact risk-taking behaviors
- Explain behavioral and psychological adjustment in adolesces and how they impact development

The human brain is not fully developed by the time a person reaches puberty. Between the ages of 10 and 25, the brain undergoes changes that have important implications for behavior. The brain reaches 90% of its adult size by the time a person is six or seven years of age. Thus, the brain does not grow in size much during adolescence. However, the creases in the brain continue to become more complex until the late teens. The biggest changes in the folds of the brain during this time occur in the parts of the cortex that process cognitive and emotional information. Changes to the brain directly influence changes to behavior and mental process. We will discuss some of these issues.

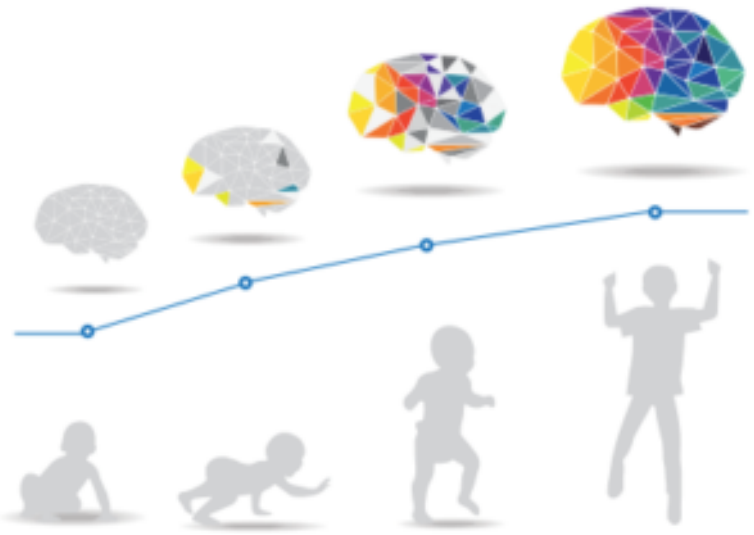


Figure 5.1.1. The brain reaches its largest size in the early teen years but continues to mature well into the 20s.

5.1: Brain Basics

5.2: Brain Changes during Adolescence

5.3: Adolescent Sleep

5.4: Teens and Risk-Taking Behavior

5.5: Inside the Teenage Brain

5.6: Behavioral and Psychological Adjustment

5.7: Glossary

This page titled 5: Brain Development during Adolescence is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

5.1: Brain Basics

The nervous system is composed of two basic cell types: glial cells (also known as glia) and neurons. **Glial cells** are traditionally thought to play a supportive role to neurons, both physically and metabolically. Glial cells provide scaffolding on which the nervous system is built, help neurons line up closely with each other to allow neuronal communication, provide insulation to neurons, transport nutrients and waste products, and mediate immune responses. **Neurons**, on the other hand, serve as interconnected information processors that are essential for all of the tasks of the nervous system. This section briefly describes the structure and function of neurons.

Communication within the central nervous system (CNS), which consists of the brain and spinal cord, begins with nerve cells called **neurons**. Neurons connect to other neurons via networks of nerve fibers called **axons** and **dendrites**. Each neuron typically has a single axon and numerous dendrites that are spread out like branches of a tree (some will say it looks like a hand with fingers). The axon of each neuron reaches toward the dendrites of other neurons at intersections called **synapses**, which are critical communication links within the brain. Axons and dendrites do not touch, instead, electrical impulses in the axons cause the release of chemicals called **neurotransmitters** which carry information from the axon of the sending neuron to the dendrites of the receiving neuron.

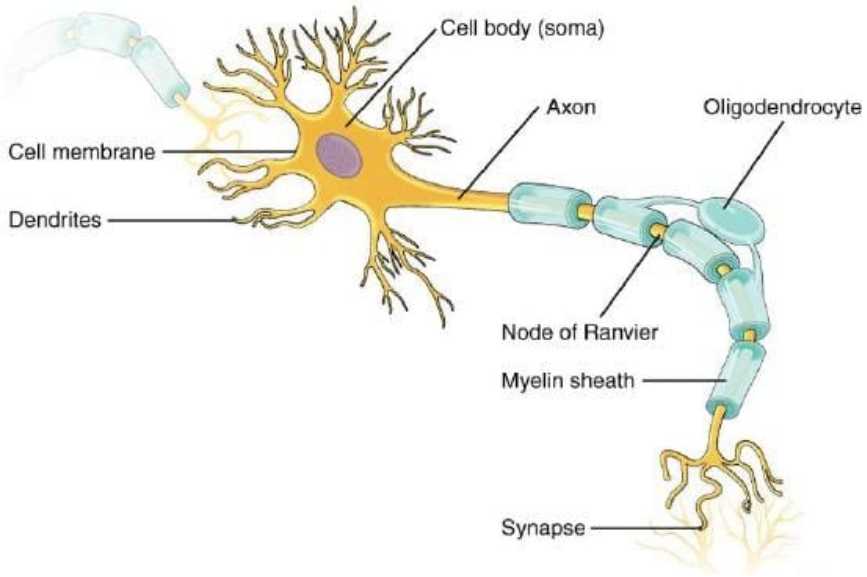


Figure 5.2.1. Neuron.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 5.2.1. The Neuron explains the part of the neuron and the signal transmission of the neurocommunication process.

https://assessments.lumenlearning.co...sessments/4140

Synaptogenesis and Synaptic Pruning

While most of the brain's 100 to 200 billion neurons are present at birth, they are not fully mature. Each neural pathway forms thousands of new connections during infancy and toddlerhood. **Synaptogenesis**, *or the formation of connections between neurons*, continues from the prenatal period forming thousands of new connections during infancy and toddlerhood. During the next several years, dendrites**,** or connections between neurons, will undergo a period of **transient exuberance** or temporary dramatic growth (*exuberant* because it is so rapid and *transient* because some of it is temporary). There is such a proliferation of these dendrites during these early years that by age 2 a single neuron might have thousands of dendrites.

After this dramatic increase, the neural pathways that are not used will be eliminated through a process called **synaptic pruning**, *where neural connections are reduced, thereby making those that are used much stronger*. It is thought that pruning causes the brain to function more efficiently, allowing for mastery of more complex skills (Hutchinson, 2011). Experience will shape which of these connections are maintained and which of these are lost. Ultimately, about 40 percent of these connections will be lost (Webb, Monk, and Nelson, 2001). Transient exuberance occurs during the first few years of life, and pruning continues through childhood and into adolescence in various areas of the brain. This activity is occurring primarily in the **cortex** or the thin outer covering of the brain involved in voluntary activity and thinking.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 5.2.2. Synaptic Pruning explains the reasons for pruning.

https://assessments.lumenlearning.co...essments/16548

Myelination

Another significant change occurring in the central nervous system is the development of **myelin**, a coating of fatty tissues around the axon of the neuron (Carlson, 2014). myelin helps insulate the nerve cell and speed the rate of transmission of impulses from one cell to another. This increase enhances the building of neural pathways and improves coordination and control of movement and thought processes. During infancy, myelination progresses rapidly, with increasing numbers of axons acquiring myelin sheaths. This corresponds with the development of cognitive and motor skills, including language comprehension, speech acquisition, sensory processing, crawling, and walking. Myelination in the motor areas of the brain during early to middle childhood leads to vast improvements in fine and gross motor skills. Myelination continues through adolescence and early adulthood and although largely complete at this time, myelin sheaths can be added in grey matter regions such as the cerebral cortex, throughout life.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 5.2.3. Myelin explains the formation and purpose of myelin.

Neuroplasticity

Lastly, **neuroplasticity** refers to the brain's ability to change, both physically and chemically, to enhance its adaptability to environmental change and compensate for injury. Neuroplasticity enables us to learn and remember new things and adjust to new experiences. Both environmental experiences, such as stimulation, and events within a person's body, such as hormones and genes, affect the brain's plasticity. So too does age. Our brains are the most "plastic" when we are young children, as it is during this time that we learn the most about our environment. Adult brains demonstrate neuroplasticity, but they are influenced more slowly and less extensively than those of children (Kolb & Whishaw, 2011).

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 5.2.4. Long-term Potentiation and Synaptic Plasticity explains how learning occurs through synaptic connections and plasticity.

The control of some specific bodily functions, such as movement, vision, and hearing, is performed in specified areas of the cortex. If these areas are damaged, the individual will likely lose the ability to perform the corresponding function. For instance, if an infant suffers damage to facial recognition areas in the temporal lobe, likely, he or she will never be able to recognize faces (Farah, Rabinowitz, Quinn, & Liu, 2000). On the other hand, the brain is not divided up in an entirely rigid way. The brain's neurons have a remarkable capacity to reorganize and extend themselves to carry out particular functions in response to the needs of the organism, and to repair the damage. As a result, the brain constantly creates new neural communication routes and rewires existing ones.

The Amazing Power of Neuroplasticity

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 5.2.5. The Story of Jody is a case study about a young girl that had the right hemisphere of her brain removed as a treatment for severe seizures. Due to neuroplasticity, Jody was able to recover from the damage caused by the removal of so much of her cerebrum.

Brain Structures

At birth, the brain is about 25 percent of its adult weight, and by age two, it is at 75 percent of its adult weight. Most of the neural activity is occurring in the **cortex** or the thin outer covering of the brain involved in voluntary activity and thinking. The cortex is divided into two hemispheres, and each hemisphere is divided into four lobes, each separated by folds known as fissures. If we look at the cortex starting at the front of the brain and moving over the top, we see first the **frontal lobe** (behind the forehead), which is responsible primarily for thinking, planning, memory, and judgment. Following the frontal lobe is the **parietal lobe**, which extends from the middle to the back of the skull and which is responsible primarily for processing information about touch. Next is the **occipital lobe**, at the very back of the skull, which processes visual information. Finally, in front of the occipital lobe, between the ears, is the **temporal lobe**, which is responsible for hearing and language.

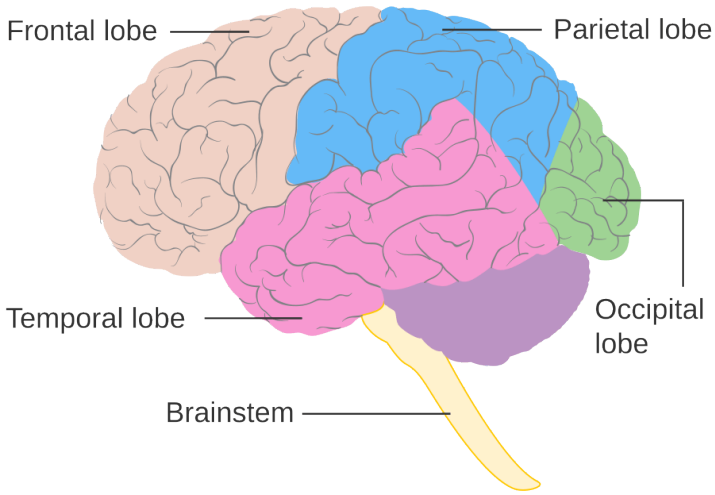


Figure 5.2.2. Lobes of the brain.

Although the brain grows rapidly during infancy, specific brain regions do not mature at the same rate. Primary motor areas develop earlier than primary sensory areas, and the prefrontal cortex, which is located behind the forehead, is the least developed. As the prefrontal cortex matures, the child is increasingly able to regulate or control emotions, to plan activities, strategize, and have better judgment. This maturation is not fully accomplished in infancy and toddlerhood but continues throughout childhood, adolescence, and into adulthood.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 5.2.6. Lobes and Landmarks of the Brain Surface identifies the lobes and some of the major cortexes of the brain.

https://assessments.lumenlearning.co...essments/16591

Lateralization

Lateralization is the process in which different functions become localized primarily on one side of the brain. For example, in most adults, the left hemisphere is more active than the right during language production, while the reverse pattern is observed during tasks involving visuospatial abilities (Springer & Deutsch, 1993). This process develops over time, however, structural asymmetries between the hemispheres have been reported even in fetuses (Chi, Dooling, & Gilles, 1997; Kasprian et al., 2011) and infants (Dubois et al., 2009).

Growth in the Hemispheres and Corpus Callosum

Between ages 3 and 6, the left hemisphere of the brain grows dramatically. This side of the brain or hemisphere is typically involved in language skills. The right hemisphere continues to grow throughout early childhood and is involved in tasks that require spatial skills, such as recognizing shapes and patterns. The Corpus Callosum, a dense band of fibers that connects the two hemispheres of the brain, contains approximately 200 million nerve fibers that connect the hemispheres (Kolb & Whishaw, 2011).

The corpus callosum is located a couple of inches below the longitudinal fissure, which runs the length of the brain and separates the two cerebral hemispheres (Garrett, 2015). Because the two hemispheres carry out different functions, they communicate with each other and integrate their activities through the corpus callosum. Additionally, because incoming information is directed toward one hemisphere, such as visual information from the left eye being directed to the right hemisphere, the corpus callosum shares this information with the other hemisphere.

The corpus callosum undergoes a growth spurt between ages 3 and 6, and this results in improved coordination between right and left hemisphere tasks. For example, in comparison to other individuals, children younger than 6 demonstrate difficulty coordinating an Etch A Sketch toy because their corpus callosum is not developed enough to integrate the movements of both hands (Kalat, 2016).

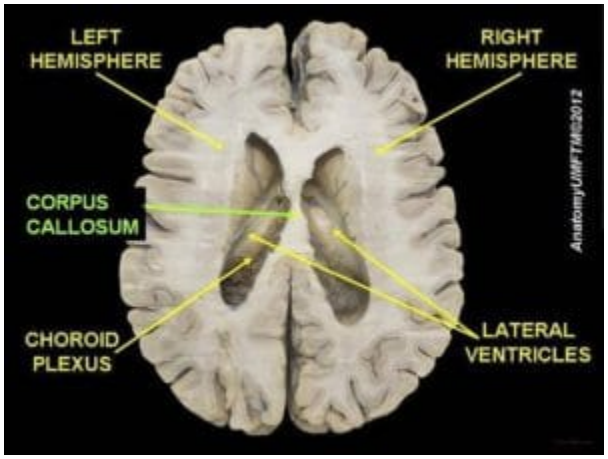


Figure 5.2.3. Corpus callosum.

https://assessments.lumenlearning.co...essments/16575

Candela Citations

CC licensed content, Original

- Brain Basics. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad.../brain-basics/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Brain Development. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ed...n-development/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- Psychology 2e. **Authored by**: Rose M. Spielman, William J. Jenkins, Marilyn D. Lovett. **Provided by**: Open Stax. **Retrieved from**: https://openstax.org/books/psycholog...nervous-system. **License**: CC BY: Attribution

CC licensed content, Specific attribution

- Long-term Potentiation and Synaptic Plasticity. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/uVQXZudZd5s. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- 2-Minutes Neuroscience: The Neuron. **Provided by**: Neuroscientifically Challenged. **Retrieved from**: https://youtu.be/6qS83wD29PY. **License**: CC BY: Attribution
- 2-minute Neuroscience: Myelin . **Provided by**: Neuroscientifically Challenged. **Retrieved from**: https://youtu.be/5V7RZwDpmXE. **License**: CC BY: Attribution
- 2-minute Neuroscience: Lobes and Landmarks of the Brain Surface. **Provided by**: Neuroscientifically Challenged. **Retrieved from**: https://youtu.be/LQ4DlE1Xyd4. **License**: CC BY: Attribution

All rights reserved content

- Brain Plasticity--The Story of Jody. **Retrieved from**: https://youtu.be/VaDlLD97CLM. **License**: *All Rights Reserved*
- Synaptic Pruning. **Provided by**: Alila Medical Media. **Retrieved from**: https://youtu.be/0S0jKbh6R1I. **License**: *All Rights Reserved*

This page titled 5.1: Brain Basics is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

5.2: Brain Changes during Adolescence

During adolescence, brain cells continue to bloom in the frontal region. Some of the most developmentally significant changes in the brain occur in the **prefrontal cortex**, which is involved in decision making and cognitive control, as well as other higher cognitive functions. During adolescence, **myelination** and **synaptic pruning** in the prefrontal cortex increases, improving the efficiency of information processing, and neural connections between the prefrontal cortex and other regions of the brain are strengthened. However, this growth takes time, and the growth is uneven.

The Limbic System

The **limbic system** develops years ahead of the prefrontal cortex. Development in the limbic system plays an important role in determining rewards and punishments and processing emotional experience and social information. Pubertal hormones target the **amygdala** directly, and powerful sensations become compelling (Romeo, 2013). Brain scans confirm that cognitive control, revealed by fMRI studies, is not fully developed until adulthood because the prefrontal cortex is limited in connections and engagement (Hartley & Somerville, 2015). Recall that this area is responsible for judgment, impulse control, and planning, and it is still maturing into early adulthood (Casey, Tottenham, Liston, & Durston, 2005).

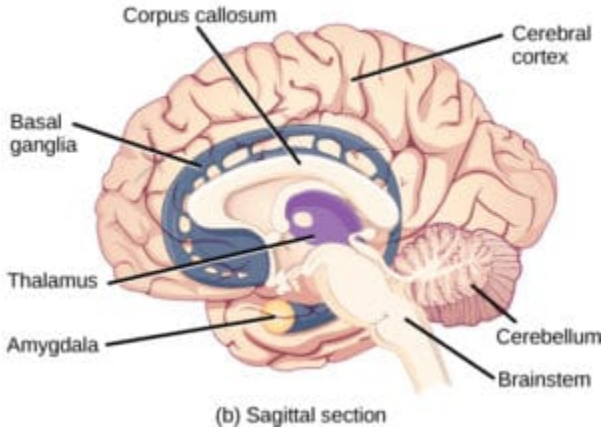


Figure 5.3.1. The limbic system.

Additionally, changes in both the levels of the neurotransmitters **dopamine** and **serotonin** in the limbic system make adolescents more emotional and more responsive to rewards and stress. Dopamine is a neurotransmitter in the brain associated with pleasure and attuning to the environment during decision-making. During adolescence, dopamine levels in the limbic system increase, and the input of dopamine to the prefrontal cortex increases. The increased dopamine activity in adolescence may have implications for adolescent risk-taking and vulnerability to boredom. Serotonin is involved in the regulation of mood and behavior. It affects the brain in a different way. Known as the “calming chemical,” serotonin eases tension and stress. Serotonin also puts a brake on the excitement and sometimes recklessness that dopamine can produce. If there is a defect in the serotonin processing in the brain, impulsive or violent behavior can result.

The Prefrontal Cortex

The prefrontal cortex, the part of the frontal lobes lying just behind the forehead, is often referred to as the “CEO of the brain,” the cognitive control center. This brain region is responsible for cognitive analysis, abstract thought, the moderation of “correct” behavior in social situations, the capacity to exercise good judgment, self-regulation, and future orientation The prefrontal cortex takes in information from all of the senses and orchestrates thoughts and actions to achieve specific goals (Casey, Jones, & Hare, 2008; Walsh, 2004). Around 11 years of age, this region of the brain begins an extended process of pruning and myelination and is not complete until near the age of 25. This is one of the last regions of the brain to reach maturation. This delay may help to explain why some adolescents act the way they do. The so-called “executive functions” of the human prefrontal cortex include:

- Focusing attention

- Organizing thoughts and problem-solving
- Foreseeing and weighing possible consequences of behavior
- Considering the future and making predictions
- Forming strategies and planning
- Ability to balance short-term rewards with long term goals
- Shifting/adjusting behavior when situations change
- Impulse control and delaying gratification
- Modulation of intense emotions
- Inhibiting inappropriate behavior and initiating appropriate behavior
- Simultaneously considering multiple streams of information when faced with complex and challenging information

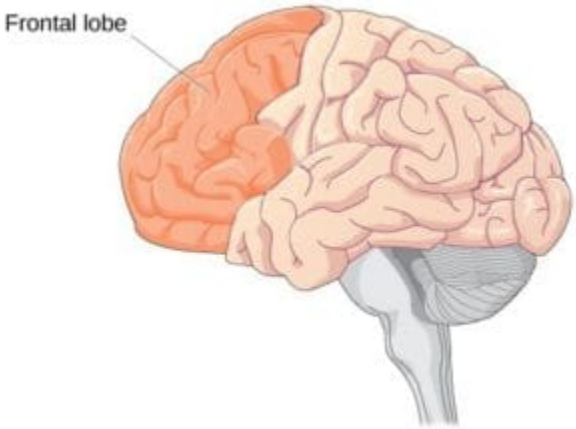


Figure 5.3.2. Brain development continues into the early 20s. The development of the frontal lobe, in particular, is important during this stage.

The difference in timing of the development of the limbic system and prefrontal cortex contributes to more risk-taking during adolescence because adolescents are motivated to seek thrills that sometimes come from risky behavior, such as reckless driving, smoking, or drinking, and have not yet developed the cognitive control to resist impulses or focus equally on the potential risks (Steinberg, 2008). One of the world's leading experts on adolescent development, Laurence Steinberg, likens this to engaging a powerful engine before the braking system is in place. The result is that adolescents are more prone to risky behaviors than are children or adults.

Brain Region Integration

MRI studies of the brain show that developmental processes tend to occur in the brain in a back-to-front pattern, explaining why the prefrontal cortex develops last. These studies have also found that teens have less white matter (myelin) in the frontal lobes of their brains when compared to adults, but this amount increases as the teen ages. With more myelin comes the growth of important brain connections, allowing for a better flow of information between brain regions. MRI research has also revealed that during adolescence, white matter increases in the corpus callosum, the bundle of nerve fibers connecting the right and left hemispheres of the brain. This allows for enhanced communication between the hemispheres and enables a full array of analytic and creative strategies to be brought to bear in responding to the complex dilemmas that may arise in a young person's life (Giedd, 2004).

In sum, the adolescent years are a time of intense brain changes. Interestingly, two of the primary brain functions develop at different rates. Brain research indicates that the part of the brain that perceives rewards from risk, the limbic system, kicks into high gear in early adolescence. The part of the brain that controls impulses and engages in longer-term perspective, the frontal lobes, mature later. This may explain why teens in mid-adolescence take more risks than older teens.

As the frontal lobes become more developed, two things happen. First, self-control develops as teens are better able to assess cause and effect. Second, more areas of the brain become involved in processing emotions, and teens become better at accurately interpreting others' emotions.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 5.3.1. Brain Changes during Adolescence describes some of the physical changes that occur during adolescence.

The Teen Brain: 6 Things to Know from the National Institute of Mental Health

Your brain does not keep getting bigger as you get older

For girls, the brain reaches its largest physical size around 11 years old and for boys, the brain reaches its largest physical size around age 14. Of course, this difference in age does not mean either boys or girls are smarter than one another!

But that doesn't mean your brain is done maturing

For both boys and girls, although your brain may be as large as it will ever be, your brain doesn't finish developing and maturing until your mid- to late-20s. The front part of the brain, called the prefrontal cortex, is one of the last brain regions to mature. It is the area responsible for planning, prioritizing, and controlling impulses.

The teen brain is ready to learn and adapt

In a digital world that is constantly changing, the adolescent brain is well prepared to adapt to new technology—and is shaped in return by experience.

Many mental disorders appear during adolescence

All the big changes the brain is experiencing may explain why adolescence is the time when many mental disorders—such as schizophrenia, anxiety, depression, bipolar disorder, and eating disorders—emerge.

The teen brain is resilient

Although adolescence is a vulnerable time for the brain and for teenagers in general, most teens go on to become healthy adults. Some changes in the brain during this important phase of development actually may help protect against long-term mental disorders.

Teens need more sleep than children and adults

Although it may seem like teens are lazy, science shows that melatonin levels (or the "sleep hormone" levels) in the blood naturally rise later at night and fall later in the morning than in most children and adults. This may explain why many teens stay up late and struggle with getting up in the morning. Teens should get about 9-10 hours of sleep a night, but most teens don't get enough sleep. A lack of sleep makes paying attention hard, increases impulsivity, and may also increase irritability and depression.

https://assessments.lumenlearning.co...essments/16610

Candela Citations

CC licensed content, Original

- Brain Changes during Adolescence. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad.../brain-changes. **License**: CC BY-NC-SA: Attribution-

NonCommercial-ShareAlike

CC licensed content, Shared previously

- Brain Development. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ed...in-development. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Specific attribution

- Brain Changes during Adolescence . **Authored by**: Brooke Miller. **Provided by**: Khan Academy . **Retrieved from**: https://youtu.be/5Fa8U6BkhNo. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

This page titled 5.2: Brain Changes during Adolescence is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

5.3: Adolescent Sleep

Brain development even affects the way teens sleep. Adolescents' normal sleep patterns are different from those of children and adults. Teens are often drowsy upon waking, tired during the day, and wakeful at night. Although it may seem like teens are lazy, science shows that **melatonin** levels (or the "sleep hormone" levels) in the blood naturally rise later at night and fall later in the morning in teens than in most children and adults. This may explain why many teens stay up late and struggle with getting up in the morning.

According to the National Sleep Foundation (NSF) (2016), adolescents need about 8 to 10 hours of sleep each night to function best. The most recent Sleep in America poll in 2006 indicated that adolescents between sixth and twelfth grade were not getting the recommended amount of sleep. On average, adolescents only received 7 ½ hours of sleep per night on school nights with younger adolescents getting more than older ones (8.4 hours for sixth graders and only 6.9 hours for those in twelfth grade). For older adolescents, only about one in ten (9%) get an optimal amount of sleep, and they are more likely to experience negative consequences the following day. These include feeling too tired or sleepy, being cranky or irritable, falling asleep in school, having a depressed mood, and drinking caffeinated beverages (NSF, 2016). Additionally, they are at risk for substance abuse, car crashes, poor academic performance, obesity, and a weakened immune system (Weintraub, 2016).

Why don't adolescents get adequate sleep? In addition to known environmental and social factors, including work, homework, media, technology, and socializing, the adolescent brain is also a factor. As adolescents go through puberty, their circadian rhythms change and push back their sleep time until later in the evening (Weintraub, 2016). This biological change not only keeps adolescents awake at night, but it also makes it difficult for them to get up in the morning. When they are awake too early, their brains do not function optimally. Impairments are noted in attention, behavior, and academic achievement, while increases in tardiness and absenteeism are also demonstrated.

To support adolescents' later sleeping schedule, the Centers for Disease Control and Prevention recommended that school not begin any earlier than 8:30 a.m. Unfortunately, over 80% of American schools begin their day earlier than 8:30 a.m. with an average start time of 8:03 a.m. (Weintraub, 2016). Psychologists and other professionals have been advocating for later school times, and they have produced research demonstrating better student outcomes for later start times. More middle and high schools have changed their start times to reflect the sleep research better. However, the logistics of changing start times and bus schedules are proving too difficult for some schools leaving many adolescents vulnerable to the negative consequences of sleep deprivation.

Links to Learning

As research reveals the importance of sleep for teenagers, many people advocate for later high school start times. Read about some of the **research at the National Sleep Foundation on school start times**.

Video 5.4.1. Why Schools Should Start Later for Teens discusses how early school start times impact teens and how later start times can benefit students.

Candela Citations

CC licensed content, Original

- Adolescent Sleep. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Sleep. **Authored by**: Martha Lally and Suzanne Valentine-French. **Provided by**: College of Lake County Foundation. **Retrieved from**: http://dept.clcillinois.edu/psy/Life...evelopment.pdf.. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

All rights reserved content

- Why Schools Should Start Later for Teens. **Authored by**: Wendy Troxel. **Provided by**: TedX Talks. **Retrieved from**: https://www.ted.com/talks/wendy_trox...ce=tedcomshare. **License**: All Rights Reserved

This page titled 5.3: Adolescent Sleep is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

5.4: Teens and Risk-Taking Behavior

Neuroscience has found that there is early maturation of the limbic system and a prolonged maturation of the prefrontal cortex region of the brain. The maturation of these areas is associated with increased self-control, while the absence of maturation is associated with impulsivity and poor decision-making (Romer, 2012). Adolesces is often associated with greater risk-taking behavior and impulsivity, as demonstrated by increased experimentation with drug use, accidents, and risky sexual behavior (Arnett, 1992).

The propensity for risking-taking behavior is likely influenced by several factors. There are changes happening in parts of the brain that may increase teens' tendencies toward risky behaviors. There is limited maturation in parts of the brain that may control risky decisions and behavior. Moreover, experiences may increase or decrease the proclivity for risky behavior.

Sensation-Seeking

All areas of the brain are not maturing at the same time and rate. Some parts of the brain develop earlier, while others are not fully mature until adulthood. An area of the brain referred to as the 'rewards system' begins to develop rather early in adolescence. The rewards system is stimulated with increased releases of dopamine when engaged in sensation-seeking behavior. This change encourages adolescence to desire independence, seek novel experiences, and engage in more adult-like activities (Spear, 2007). Many of these exciting, novel, independent activities are associated with some risk (e.g., drugs, driving, sex). Increases in sensation-seeking behavior are observed in 14 to 22-year-olds. The level of sensation-seeking is typically greater in males than females and continues further into adulthood for males. Sensation-seeking behavior tends to peak in females around 16, whereas males peak around 19 (Romer, 2012).

The decision-making process involved in sensation-seeking may be the same heuristic that influences adult decisions. Heuristics are simple decision rules that allow us to make decisions quickly, without much contemplation. In this case, the affect heuristic seems to apply in many risky decisions. The affect heuristic relies on our dominant affective (emotional) reaction to a situation when evaluating the risks and rewards. Simply, we tend to conclude that the more positive effect that is associated with a situation, the less risk we attach. The rational choice would expect us to evaluate risk and reward separately, not in relation to one another. Enjoying an activity does not inherently make it less risky, and safe activity is not innately less enjoyable (Romer, 2012).

Peers are another influence on risk-taking behavior. Adolescent sensation seekers not only associate the positive effects with risky behaviors, but they also seek out peers with similar interests. These peers create a social group that may encourage risk-taking behavior and increases the positive affect associated with the experience. The influence of peers on risky behavior is greater than that of sensation-seeking alone. However, the combination of sensation-seeking and peer influence has a significantly greater influence on risky adolescent behavior than sensation-seeking or peer influence alone (Romber, 2012).

Delayed Executive Functioning

Another area of the brain that may influence risk-taking tendencies in adolescence is the prefrontal cortex. As previously mentioned, this part of the brain is not fully developed until early adulthood. The developed prefrontal cortex allows us to assess situations, consider consequences, and control impulses adequately. The gap between the increase in the sensation-seeking of the rewards system and the slower-developing prefrontal cortex puts adolescents at particular jeopardy for risk-taking behaviors and potentially unhealthy outcomes.

Brain research data has led to the idea of 'frontalization,' whereby the prefrontal cortex gradually becomes able to oversee and regulate the behavioral responses initiated by the more primitive limbic structures. However, when stress, arousal, or sensations become extreme, the adolescent brain is flooded with impulses that overwhelm the prefrontal cortex, and as a result, adolescents engage in increased risk-taking behaviors and emotional outbursts. With an immature prefrontal cortex, even if teens understand that something is dangerous, they may still engage in risky behavior. Recognizing the asynchrony of development of the regions of the brain helps us to see adolescent risk-taking in a whole new light.

The Influence of Experience

Risk-taking behavior is not uniform across adolescence or among adolescents. For example, the Seattle Social Development Project (Hill, White, Hawkins, & Catalano, 2000) found that 70% of youth 13 to 18 had not engaged in binge drinking. Three percent reported binge drinking starting at 13 years old and continued through age 18. Another four percent engaged in binge drinking later in adolescence. And 23% didn't binge drink until they were 18 years old. The likelihood f engaging in risk-taking behavior and the timing of these behaviors may be influenced by experience—either early life experiences that increase the propensity toward risk-taking or normative age-graded influences.

For some teens, their impulsivity and risk-taking behavior may have begun years before and persisted into adolescence. There is considerable evidence that adolescent risk-taking, for some, is due to impaired impulse control that occurred in the first years of life due to exposure to severe, chronic stress. This type of stress can have a 'toxic' effect on a range of behaviors and health outcomes. The Adverse Childhood Experiences (ACE) study (CDC, 2019) found that exposure to abuse, neglect, domestic or community violence, familial substance abuse or mental illness, separation from parents, homelessness, discrimination, natural disasters, and war are serious traumas that result in toxic stress. Those facing adverse childhood experiences are at higher risk for adolescent pregnancy, early sexual activity, multiple sexual partners, intimate partner violence, substance abuse, depression, suicide, and poor physical health. In general, the more adverse childhood experiences, the more risky behaviors in adolescence.

The second source for risk, as previously discussed, is the increase in sensation-seeking associated with brain development. Those changes encourage experimentation with adult-like behavior. These risky behaviors are part of normative age-graded influence due to a lack of experience. To overcome the tendency toward these behaviors is to gain experience in taking risks. The role of experience is critical in developing the neural connectivity that allows for the conscious cognitive control of the emotions and passions of adolescence. Teens who take risks in relatively safe situations exercise the circuitry and develop the skills to "put on the brakes" in more dangerous situations (Giedd, 2004).

Decreasing the Risk

Mitigating the extremes of risk-taking and potential unhealthy outcomes is possible. There are two approaches to helping young people reduce risk and stay safe. First, early intervention, before children reach adolescence, is the best time to teach executive functioning and self-regulation skills that can reduce impulsivity. Second, teens need to gain life experience. When high sensation-seekers engage in risk-taking, they develop greater patience. Patience is a factor that reduces risk-taking behavior. This effect is amplified in conduct-disordered teens. Conduct disorder is a psychological diagnosis applied only to minors, characterized by impulsivity, aggression, deceitfulness, destructive behavior, and resistance to authority or rules. These youth are often sensation-seeking and take risks with the possibility of serious consequences. However, despite their greater risk-taking behavior, their consequences may actually result in them being less impatient than their low sensation-seeking peers (Turner & Piquero, 2002). It seems that teens need to engage in some risk-taking behavior to learn from the consequences of their experiences.

Adolescents are often mischaracterized as irrational loose cannons. However, while adolescents may be learning to think like adults, their brains are not fully developed. A hopped-up rewards system that can drown out warning signals about risk from an underdeveloped prefrontal cortex results in more risk-taking behaviors. Adolescent decisions are not always defined by impulsivity because of lack of brakes, but because of planned and enjoyable pressure to the accelerator. It is helpful to put all of these brain processes in a developmental context. Young people need to somewhat enjoy the thrill of risk-taking in order to complete the incredibly overwhelming task of growing up.

This page titled 5.4: Teens and Risk-Taking Behavior is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

5.5: Inside the Teenage Brain

https://www.pbs.org/wgbh/frontline/film/inside-the-teenage-brain/

Video 5.6.1. Inside the Teenage Brain discusses brain changes during adolescence and how these developments impact thinking and behavior.

Exercise 5.5.1

What are the two basic stages of brain development?

Answer available at the end of this section.

Exercise 5.5.2

When is brain development the most dramatic?

Answer available at the end of this section.

Exercise \({5{.}5{.}\eatSpaces{3\)

How does this massive pruning impact learning?

Answer available at the end of this section.

Exercise Extra close brace or missing open brace

How much sleep do teens need?

Answer available at the end of this section.

Exercise 5.5.5

What happens when teens experience a sleep debt?

Answer available at the end of this section.

Exercise 5.5.6

Why is sleep important for learning and memory?

Answer available at the end of this section.

Exercise 5.5.7

Is there anything teens can do to get the sleep that they need and prevent sleep deficits?

Answer available at the end of this section.

Exercise 5.5.8

Do teens process emotion differently?

Answer available at the end of this section.

Exercise 5.5.9

True or False: Teens do not want to spend time with their parents and wish for parents to leave them alone.

Answer available at the end of this section.

Candela Citations

CC licensed content, Original

- Inside the Teenage Brain. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...teenage-brain/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

All rights reserved content

- Inside the Teenage Brain. **Provided by**: Frontline, PBS. **Retrieved from**: https://www.pbs.org/wgbh/frontline/f...teenage-brain/. **License**: *All Rights Reserved*

Answers

Exercise 5.5.1

The vast majority of brain development occurs in two basic stages: growth spurts and pruning (Inside the Teenage Brain, Frontline, PBS).

Exercise 5.5.2

We've known that "in utero and throughout the first several months of life, the human brain grows at a rapid and dramatic pace, producing millions of brain cells." However, between ages 10 and 13, there is a second wave of rapid development that is quickly followed by a process in which the brain prunes and organizes its neural pathways(Inside the Teenage Brain, Frontline, PBS).

Exercise \({5{.}5{.}\eatSpaces{3\)

According to Giedd, "our leading hypothesis ... is the 'use it or lose it' principle,..if a teen is doing music or sports or academics, those are the cells and connections that will be hardwired. If they're lying on the couch or playing video games or [watching] MTV, those are the cells and connections that are going to survive" (Inside the Teenage Brain, Frontline, PBS).

Exercise Extra close brace or missing open brace

Mary Carskadon, director of the E.P. Bradley Hospital Sleep Research Laboratory at Brown University, says that on average, teens require more than 9 hours of sleep per night. However, most teens get about seven and a half hours of sleep, creating a sleep debt (Inside the Teenage Brain, Frontline, PBS).

Exercise 5.5.5

Sleep debts affect a teen's ability to learn and retain information, particularly, abstract concepts (Inside the Teenage Brain, Frontline, PBS).

Exercise 5.5.6

The brain consolidates and practices what is learned during the day after we go to sleep. Learning actually continues to take place while a person is asleep.

The brain consolidates learning during two particular phases of sleep. According to Dr. Robert Stickgold of Harvard University Medical School, "the brain seems to need lots of slow-wave sleep and a good chunk of another kind of sleep, Rapid Eye Movement, or REM. Dr. Stickgold hypothesizes that the reason the brain needs these particular kinds of sleep is that certain brain chemicals plummet during the first part of the night, and information flows out of the hippocampus (the memory region) and into the cortex. He thinks the brain then distributes the new information into appropriate networks and categories. Inside the brain, proteins strengthen the connections between nerve cells consolidating the new skills learned the day before. Then later, during REM, the brain re-enacts the lessons from the previous day and solidifies the newly-made connections through the memory banks" (Inside the Teenage Brain, Frontline, PBS)

Exercise 5.5.7

Sleep experts say dimming the lights at night and getting lots of daylight in the morning can help. Having a routine bedtime of 10 p.m., sleeping in a cool environment and turning off music, the Internet, and televisions would help to reset the body clock. And though sleeping in is a good thing, trying to get up after only an extra hour or two is a lot better than "binge-sleeping" on the weekends. If a student is used to getting up at 6:30 a.m., they shouldn't sleep until noon on the weekend. That simply confuses their bodies. And lots of sports helps, too — better earlier in the day than late" (Inside the Teenage Brain, Frontline, PBS)

Exercise 5.5.8

Deborah Yurgelun-Todd and a group of researchers have studied how adolescents perceive emotion as compared to adults. Adults and teens were shown pictures of adult faces and asked to identify the emotion expressed. Using fMRI, the researchers traced the part of the brain responded as subjects were asked to identify the expression depicted in the picture.

The adults correctly identified the emotions expressed in the pictures, but the teens misinterpreted the expressions. The teens and adults also used different parts of their brains to process the information. The fMRI showed the amygdala most active in teens. This mid-brain structure guides instinctual or "gut" reactions. In adults, the frontal cortex, which governs reason and planning, was active during this exercise.

As the teens got older, the center of activity shifted more toward the frontal cortex and away from the amygdala (Inside the Teenage Brain, Frontline, PBS).

Exercise 5.5.9

Ellen Galinsky, a social scientist and the president of the Families and Work Institute, found that in her interviews with more than a thousand children, teens desire more time and more communication with their parents, even when they seemed to be pushing parents away. "Even though the public perception is about building bigger and better brains, what the research shows is that it's the relationships, it's the connections, it's the people in children's lives who make the biggest difference" (Inside the Teenage Brain, Frontline, PBS)

This page titled 5.5: Inside the Teenage Brain is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

5.6: Behavioral and Psychological Adjustment

With all of these brain changes and novel experiences, we expect to see adolescents undergo significant behavioral and psychological adjustments. Adolescents are facing strong emotions, changing peer relationships, more independence, expectations to be more adult-like, and a desire to take risks, all while lacking a fully mature brain or the life experience to navigate these situations. It is inevitable that some mistakes will occur along the way, as well as a great deal of learning. We will examine some typical adjustment issues encountered by adolescents: driving, aggression, drug use, anxiety, depression, and self-violence.

Teenage Drivers

In a 2017 National Children's Health poll, parents report that one of the top concerns is teen driving (C.S. Mott Children's Hospital, 2017). Driving gives teens a sense of freedom and independence from their parents and can free up time for parents as they are not shuttling teens to and from school, activities, or work. However, with higher levels of risk-taking behavior and lower levels of experience, parents are concerned with their teen's safety on the road.

The National Highway Traffic Safety Administration (NHTSA) reports that in 2014 young drivers (15 to 20 year-olds) accounted for 5.5% (11.7 million) of the total number of drivers (214 million) in the US (National Center for Statistics and Analysis (NCSA), 2016). However, almost 9% of all drivers involved in fatal crashes that year were young drivers (NCSA, 2016), and according to the National Center for Health Statistics (2014), motor vehicle accidents are the leading cause of death for 15 to 20 year-olds. "In all motorized jurisdictions around the world, young, inexperienced drivers have much higher crash rates than older, more experienced drivers" (NCSA, 2016, p. 1). The rate of fatal crashes is higher for young males than for young females, although, for both genders, the rate was highest for the 15-20 years-old age group. For young males, the rate for fatal crashes was approximately 46 per 100,000 drivers, compared to 20 per 100,000 drivers for young females. The NHTSA (NCSA, 2016) reported that of the young drivers who were killed and who had alcohol in their system, 81% had a blood alcohol count past what was considered the legal limit. Fatal crashes involving alcohol use were higher among young men than young women. The NHTSA also found that teens were less likely to use seat belt restraints if they were driving under the influence of alcohol, and that restraint use decreased as the level of alcohol intoxication increased.

In an AAA study of non-fatal, but moderate to severe motor vehicle accidents in 2014, more than half involved young male drivers 16 to 19 years of age (Carney, McGehee, Harland, Weiss, & Raby, 2015). In 36% of rear-end collisions, teen drivers were following cars too closely to be able to stop in time, and in single-vehicle accidents, driving too fast for weather and road conditions was a factor in 79% of crashes involving teens. Distraction was also a factor in nearly 60% of the accidents involving teen drivers. Fellow passengers, often also teenagers (84% of the time), and cell phones were the top two sources of distraction, respectively. This data suggested that having another teenager in the car increased the risk of an accident by 44% (Carney et al., 2015). According to the NHTSA, 10% of drivers aged 15 to 19 years involved in fatal crashes were reported to be distracted at the time of the crash, the highest figure for any age group (NCSA, 2016). Distraction, coupled with inexperience, has been found to greatly increase the risk of an accident (Klauer et al., 2014).

The NHTSA did find that the number of accidents has been on a decline since 2005. They attribute this to greater driver training, more social awareness to the challenges of driving for teenagers, and to changes in laws restricting the drinking age. The NHTSA estimates that the raising of the legal drinking age to 21 in all 50 states and the District of Columbia has saved 30,323 lives since 1975.

Aggression and Antisocial Behavior



Several major theories of the development of antisocial behavior treat adolescence as an important period. Patterson's (1982) '*early versus late starter model'* of the development of aggressive and antisocial behavior distinguishes youths whose antisocial behavior begins during childhood (early starters) versus adolescence (late starters). According to the theory, early starters are at greater risk for long-term antisocial behavior that extends into adulthood than are late starters. Late starters who become antisocial during adolescence are theorized to experience poor parental monitoring and supervision, aspects of parenting that become more salient during adolescence. Poor monitoring and lack of supervision contribute to increasing involvement with deviant peers, which, in turn, promotes adolescents' own antisocial behavior. Late starters desist from antisocial behavior when changes in the environment make other options more appealing.

Similarly, Moffitt's (1993) '*life-course-persistent versus adolescent-limited model'* distinguishes between antisocial behavior that begins in childhood versus adolescence. Moffitt regards adolescent-limited antisocial behavior as resulting from a "maturity gap" between adolescents' dependence on and control by adults and their desire to demonstrate their freedom from adult constraint. However, as they continue to develop, and legitimate adult roles and privileges become available to them, there are fewer incentives to engage in antisocial behavior, leading to discontinuation of these antisocial behaviors.

Psychology and Mass Shootings

Virginia Tech, Columbine, Stoneman Douglas High School, Santa Fe High School, Sandy Hook, Aurora, Las Vegas, Orlando—all sites of horrific and tragic mass shootings. Why are they so common? And what led the perpetrators to commit these acts of violence? Several possible factors may work together to create a fertile environment for mass murder in the United States. Most commonly suggested include:

- Higher accessibility and ownership of guns. The U.S. has the highest per-capita gun ownership in the world with 120.5 firearms per 100 people; the second highest is Yemen with 52.8 firearms per 100 people
- Mental illness and its treatment (or the lack thereof) with psychiatric drugs. This is controversial. Many of the mass shooters in the U.S. suffered from mental illness, but the estimated number of mental illness cases has not increased as significantly as the number of mass shootings. Under 5% of violent behaviors in the U.S. are committed by persons with mental health diagnoses. A 2002 report by the U.S. Secret Service and U.S. Department of Education found evidence that a majority of school shooters displayed evidence of mental health symptoms, often undiagnosed or untreated. Criminologists Fox and DeLateur note that mental illness is only part of the issue, however, and mass shooters tend to externalize their problems, blaming others, and are unlikely to seek psychiatric help, even if available. Other scholars have concluded that mass murderers display a common constellation of chronic mental health symptoms, chronic anger or antisocial traits, and a tendency to blame others for problems. However, they note that attempting to "profile" school shooters with such a constellation of traits will likely result in many false positives as many individuals with such a profile do not engage in violent behaviors.
- The desire to seek revenge for a long history of being bullied at school. In recent years, citizens calling themselves "targeted individuals" have cited adult bullying campaigns as a reason for their deadly violence.

- The widespread chronic gap between people's expectations for themselves and their actual achievement, and individualistic culture.
- The desire for fame and notoriety. Also, mass shooters learn from one another through "media contagion," that is, "the mass media coverage of them and the proliferation of social media sites that tend to glorify the shooters and downplay the victims."
- The copycat phenomenon.
- Failure of government background checks due to incomplete databases and/or staff shortages.

For additional Information: Mass Violence in America, by The National Council for Behavioral Health

Behavior and Conduct Problems

Children and adolescents sometimes argue, are aggressive, or act angry or defiant around adults. A behavior disorder may be diagnosed when these disruptive behaviors are uncommon for the child's age at the time, persist over time, or are severe. Because disruptive behavior disorders involve acting out and showing unwanted behavior towards others they are often called **externalizing disorders**.

Oppositional Defiant Disorder



When children act out persistently so that it causes serious problems at home, in school, or with peers, they may be diagnosed with Oppositional Defiant Disorder (ODD). ODD usually starts before 8 years of age, but no later than by about 12 years of age. Children with ODD are more likely to act oppositional or defiant around people they know well, such as family members, a regular care provider, or a teacher. Children with ODD show these behaviors more often than other children their age.

Examples of ODD behaviors include

- Often being angry or losing one's temper
- Often arguing with adults or refusing to comply with adults' rules or requests
- Often resentful or spiteful
- Deliberately annoying others or becoming annoyed with others
- Often blaming other people for one's own mistakes or misbehavior

Conduct Disorder

Conduct Disorder (CD) is diagnosed when children show an ongoing pattern of aggression toward others, and serious violations of rules and social norms at home, in school, and with peers. These rule violations may involve breaking the law and result in arrest. Children with CD are more likely to get injured and may have difficulties getting along with peers.

Examples of CD behaviors include

- Breaking serious rules, such as running away, staying out at night when told not to, or skipping school
- Being aggressive in a way that causes harm, such as bullying, fighting, or being cruel to animals

- Lying, stealing, or damaging other people's property on purpose

Diagnosing Behavior Disorders

Learn about the guidelines for diagnosing and treating ODD and CD

Treatment for Disruptive Behavior Disorders

Starting treatment early is important. Treatment is most effective if it fits the needs of the specific child and family. The first step to treatment is to talk with a healthcare provider. A comprehensive evaluation by a mental health professional may be needed to get the right diagnosis. Some of the signs of behavior problems, such as not following rules in school, could be related to learning problems that may need additional intervention. For younger children, the treatment with the strongest evidence is behavior therapy training for parents, where a therapist helps the parent learn effective ways to strengthen the parent-child relationship and respond to the child's behavior. For school-age children and teens, an often-used effective treatment is a combination of training and therapy that includes the child, the family, and the school.

Managing Symptoms: Staying Healthy

Being healthy is important for all children and can be especially important for children with behavior or conduct problems. In addition to behavioral therapy and medication, practicing certain healthy lifestyle behaviors may reduce challenging and disruptive behaviors your child might experience. Here are some healthy behaviors that may help:

- Engaging in regular physical activity, including aerobic and vigorous exercise
- Eating a healthful diet centered on fruits, vegetables, whole grains, legumes (for example, beans, peas, and lentils), lean protein sources, and nuts and seeds
- Getting the recommended amount of sleep each night based on age
- Strengthening relationships with family members

Prevention of Disruptive Behavior Disorders

It is not known exactly why some children develop disruptive behavior disorders. Many factors may play a role, including biological and social factors. It is known that children are at greater risk when they are exposed to other types of violence and criminal behavior, when they experience maltreatment or harsh or inconsistent parenting, or when their parents have mental health conditions like substance use disorders, depression, or attention-deficit/hyperactivity disorder (ADHD). The quality of early childhood care also can impact whether a child develops behavior problems.

Although these factors appear to increase the risk for disruptive behavior disorders, there are ways to decrease the chance that children experience them. Learn about public health approaches to prevent these risks:

- Positive parenting strategies for young children
- Child maltreatment prevention
- Youth violence prevention
- Bullying prevention
- Mental health in adults
- Finding high-quality child care

Substance Use

Adolescence is a time of rapid change and maturation. It is also a time of experimentation—with new hairstyles, clothes, attitudes, and behaviors. Some of these experiments are harmless. Others, such as using alcohol or other drugs, can have long-lasting harmful consequences. There are several reasons why it is important to identify and treat adolescent substance use.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 5.7.1. Adolescent Substance Use, Addiction, and Treatment discusses the prevalence of substance use and teens' susceptibility to abuse.

Substance use is common among adolescents. Alcohol, marijuana, and tobacco are the substances most commonly used by youth (Johnston et al., 2014), and alcohol often is the first substance to be used (Johnston et al., 2010). The percentage of young people who have used alcohol increases with age. By eighth grade, 28% of students have tried alcohol, and 12% have been drunk at least once; by twelfth grade, 68% of students have tried alcohol, and more than half have been drunk at least once (Johnston et al., 2014). In 2012, 45% of students in grades 9 through 12 reported ever having used marijuana, and 24% reported having used marijuana in the preceding 30 days. Between 2008 and 2012, the proportion of teens who used marijuana daily increased from 5% to 8% (PDFA, 2013). According to a survey published in 2014, 41% of students in grades 9 through 12 reported having tried cigarettes. Nearly one-quarter said they had used tobacco in some form in the past 30 days (Kann et al., 2014). A substantial percentage of adolescents, including 15% of 12th graders, report misuse (i.e., use without a prescription) of prescription medication, especially stimulants and pain medications (Johnston et al., 2014).

Why do Adolescents use Drugs?

As we read above, most adolescents will use drugs or alcohol before reaching adulthood; however, the reasons for use can vary greatly. A popular model for understanding the reasons and levels of drug use involves viewing the behavior as a continuum. This continuum includes non-use and experimental drugs, casual, habitual, and compulsive drug use.

A non-user is someone that has never misuse drugs. An experimental user has used drugs a few times out of curiosity. Using substances may make them feel 'grown-up,' or they may do it as a form of rebellion against authority or rules. Using may be exciting for this teen. Typically, experimental users have no significant problems with drug use, and adults are not likely aware of the use.

When substance use becomes more common among peer groups, teens are more likely to engage in social use. Using drugs or alcohol might be a way of fitting in with some social groups or with friends. Teens may feel that they are more outgoing or social when under the influence of substances. Furthermore, some teens may use substances for fun or out of boredom. There may also be circumstantial-situational reasons for substance use, such as increasing awareness or creativity and lowering inhibitions. These casual users might engage in regular drug use, maybe 2 to 4 times per week. They still associate drug use with feeling excited or stimulated, and they make efforts to maintain control of their use. Their substance use may be frequent enough that the behavior is difficult to hide from parents and school officials. Casual users may experience decreased school performance, loss of interest in previously enjoyed activities that do not involve drug use, and other atypical behaviors for the adolescent (e.g., increased lying).

As we see substance use intensify, the concern for the teen's health and safety increases. A habitual user is likely to use drugs daily, often with a particular group of friends that are also using. Drug use may be part of the group's norms and identity. Teens may also use substances to escape or to self-medicate. At this level of use, the teen may not necessarily lose control but experiences significant school and family problems. Drug use may no longer bring the excitement and stimulation previously sought. Instead, the adolescent may become impulsive, erratic, guilt-ridden, and depressed.

A compulsive user has lost control over their drug use. The person is using drugs several times per day, and they spend a significant part of their day in the procurement, maintenance, and use of a regular drug supply. These adolescents engage in behaviors that put their health and safety at risk. Their emotional state is often disorganized. Individuals in the last three categories – casual, habitual, and compulsive – are most likely to qualify for a substance use disorder diagnosis.

Risk Factors for Substance Abuse

There are certain factors that increase the risk of adolescent substance abuse. Teens that come from dysfunctional families or live in poverty are at higher risk of abuse. As are youth raised in cultures or communities where substance abuse is common. Adolescents that struggle academically or are lacking in social skills may also see higher rates of substance abuse. A highly concerning risk factor is early substance use. The earlier and the more a young person uses substances, the higher risk they are for developing a substance disorder.

Substance use has its own risks and also is associated with other risky behaviors. Adolescent substance use poses both short-term and long-term risks. In the short term, drinking, for example, can result in unintentional injuries and death, suicidal behavior, motor vehicle crashes, intimate partner violence, and academic and social problems (Brown et al., 2008; Cole et al., 2011; Weitzman Nelson, 2004). These outcomes occur because excess alcohol consumption leads to decreased cognitive abilities, inaccurate perception of risk, and impaired bodily control. These effects, in combination with the fact that compared to adults, adolescents tend to be more physically active when under the influence of alcohol, put adolescents at greater risk of harm. For example, at blood alcohol concentrations greater than zero, adolescents are at increased risk of being fatally injured or involved in fatal crashes in single, two, and more vehicles compared with sober male drivers ages 21-34 (Voas et al., 2012). Marijuana use is associated with diminished lifetime achievement (Meier et al., 2012). Tobacco use results in poor health in the short and long term, and it can be a gateway to the use of other drugs (Sims, 2009). The risk of substance use is compounded because it is associated with other risky behaviors, such as unplanned, unprotected sex, which can result in pregnancy (Brown, 2008; Levy et al., 2009; Tapert et al., 2001). Adolescents who misuse prescription opioids are at high risk of transitioning to injection drugs and overdosing (McCabe et al., 2012). Any level of substance use can be harmful to adolescents—no amount is safe.

Adolescence is a particularly vulnerable period for brain development and maturation. Adolescence is a long period of intense neurodevelopmental growth and maturation. As a result, the adolescent brain is particularly vulnerable to the toxic effects of alcohol and other drugs and to the potential for addiction. Persistent marijuana use in adolescence, for example, is associated with neuropsychological impairments across a range of functional domains (Meier et al., 2012). Moreover, stopping use does not fully restore neuropsychological functioning, suggesting particular harm to the adolescent brain.

Use tends to increase over time. National estimates of the prevalence of drinking indicate that older youth drink more and drink more heavily than do younger youth (SAMHSA, 2010). This fact makes it all the more important for pediatricians to start early with screening and brief intervention so as to prevent or delay alcohol use for as long as possible.

Substance use in adolescence is associated with harm in adulthood. The earlier an adolescent begins using substances, the greater are his or her chances of continuing to use and of developing substance use problems later in life. For example, compared to people who do not start drinking until they are young adults, people who begin to drink before age 15 are 5 times as likely to develop alcohol dependence or abuse (Chambers et al., 2003; Grant & Dawson, 1997; Hingson & Zha, 2009). Compared with adolescents who first try marijuana at age 18, those who begin using at 14 or younger are 6 times as likely to meet the criteria for illicit drug dependence or abuse later in life (SAMHSA, 2010). More than 80% of adults who smoke tobacco began before they were 18 (Sims, 2009).

Adolescents who report weekly or more frequent substance use are likely to have a severe substance use disorder. In some cases, by the time an adolescent has reached this point, parents are already aware of the drug use, although they may underestimate the seriousness of the problem. Adolescents with serious substance-use disorders require more-intensive care as soon as possible, including a comprehensive evaluation by a substance use specialist, assessment for co-occurring mental health disorders, and referral to treatment.

Prevention of Substance Abuse

Prevention of substance abuse during adolescence should be a multipronged and long term approach that involves the education of youth, families, and the community. Prevention education should begin as early as preschool and be specific to the target population (i.e., ethnicity, gender), establishing a culture against substance abuse. Effective programs for teens involve interactive education, such as peer discussions and role-playing, and focus on risk-reduction and fostering good decision-making skills.

D.A.R.E.–the drug prevention program that never worked

The primary goal of Drug Abuse Resistance Education (DARE) was to teach effective peer resistance and refusal skills so that adolescents can say “no” to drugs and their friends who may want them to use drugs. The secondary goals of the program were to build students’ social skills and enhance their self-esteem, as these are believed to be linked to adolescent drug use.

DARE was developed in 1983 as a joint effort between the Los Angeles County (Calif.) School District and the Los Angeles Police Department. In 1986, the U.S. Congress passed the Drug-Free Schools and Communities Act to promote drug abuse education and prevention programs across the country, and DARE spread rapidly, with many school districts adopting it for their students. By 1994, DARE was the most widely used school-based drug prevention program, showing up in all 50 states in the United States and spreading to six foreign countries.

Several large scale studies assessed the effectiveness of the DARE program. The findings consistently found no effects. There were no statistically significant differences between students participating in the DARE program and those that did not when comparing rates of drug use, attitudes toward drug use, or self-esteem.

Anxiety, Depression, And Self-Directed Violent Behavior

Developmental models of anxiety and depression treat adolescence as an important period, especially in terms of the emergence of differences and prevalence rates that persist through adulthood (Rudolph, 2009). Although the rates vary across specific anxiety and depression diagnoses, rates for some disorders are markedly higher in adolescence than in childhood or adulthood. For example, prevalence rates for anxiety disorders are about 19% in adults, but 32% in adolescents (NIMH, 2017). Adolescents are also more likely to experience depression (13%) compared to adults (7%) (NIMH, 2019). Rates of self-directed violence are also higher among teens (17%), followed by college students (15%), adults (5%), and children having the lowest rates (1.3%) (APA, 2015).

Anxiety

Occasional anxiety is an expected part of life. You might feel anxious when faced with a problem, before taking a test, or when making an important decision. But anxiety disorders involve more than temporary worry or fear. For a person with an anxiety disorder, the anxiety does not go away and can get worse over time. The symptoms can interfere with daily activities such as job performance, school work, and relationships.

The wide variety of **anxiety disorders** differ by the objects or situations that induce them but share features of excessive anxiety or worry about a variety of things. Fear and anxiety can cause significant problems in areas of their life, such as social interactions, school, and work. Anxiety also manifests in physiological and psychological responses, such as feeling restless, fatigued, difficulty concentrating, irritability, muscle tension, and sleep problems.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 5.7.2. Fight, Flight, Freeze–Anxiety Explained for Teens identifies symptoms and responses to the experience of anxiety.

The following data pertains to the compiling of statistics for any anxiety disorder including, panic disorder, generalized anxiety disorder, agoraphobia, specific phobia, social anxiety disorder, post-traumatic stress disorder, obsessive-compulsive disorder, and separation anxiety disorder. An estimated 31.9% of adolescents have an anxiety disorder. Of adolescents with any anxiety disorder, an estimated 8.3% had severe impairment. The prevalence of any anxiety disorder among adolescents was higher for females (38.0%) than for males (26.1%). The prevalence of any anxiety disorder was similar across age groups.

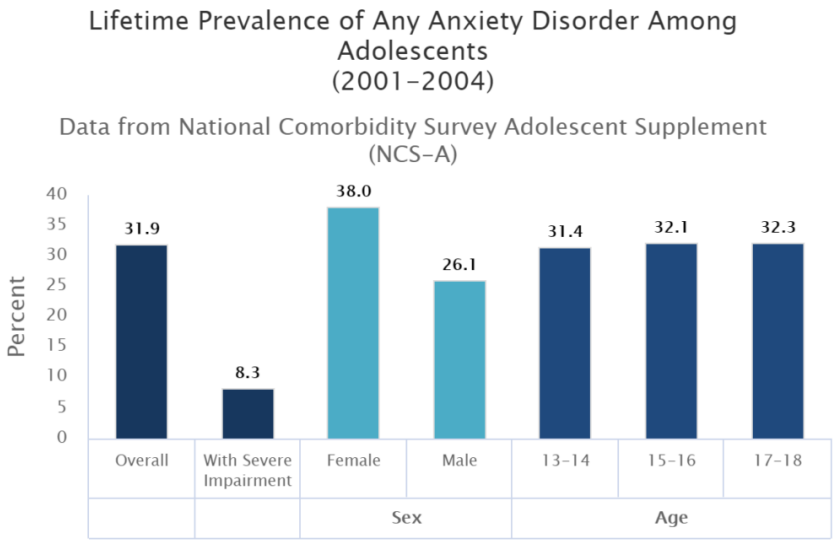


Figure 5.7.1. Prevalence of any anxiety disorder among adolescents (2001-2004). Data from the National Comorbidity Survey Adolescent Supplement (NCS-A).

Anxiety disorders are generally treated with psychotherapy, medication, or both. Psychotherapy or "talk therapy" can help people with anxiety disorders. To be effective, psychotherapy must be directed at the person's specific anxieties and tailored to his or her needs. Medication does not cure anxiety disorders but can help relieve symptoms. Medication for anxiety is prescribed by doctors, such as a psychiatrist or primary care provider. The most common classes of medications used to combat anxiety disorders are anti-anxiety drugs (such as benzodiazepines), antidepressants, and beta-blockers. Some people with anxiety disorders might benefit from joining a self-help or support group and sharing their problems and achievements with others. Talking with a trusted friend or member of the clergy can also provide support, but it is not necessarily a sufficient alternative to care from a doctor or other health professional. Stress management techniques and meditation can help people with anxiety disorders calm themselves and may enhance the effects of therapy. Research suggests that aerobic exercise can help some people manage their anxiety; however, exercise should not take the place of standard care, and more research is needed.

The Prevalence of Mental Illness in youth

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 5.7.3. In *The Prevalence of Mental Illness in* Youth, McKenna Knapp discusses the prevalence of mental health issues in young people and how the pressures to measure up in high school may contribute.

Depression

Sadness is something we all experience. It is a normal reaction to a loss or a setback, but it usually passes with a little time. Depression is different. Depression (**major depressive disorder**) is a medical illness that can interfere with a person's ability to handle daily activities, such as sleeping, eating, or managing responsibilities. Depression is common, but that doesn't mean it isn't serious. Well-meaning friends or family members may try to tell someone with depression to "snap out of it," "just be positive," but depression is not a sign of weakness or a character flaw. Many people with depression need treatment to get better.

Depression is characterized by feelings of deep sadness and hopelessness that disrupts all normal, regular activities. However, teens may not identify feelings of sadness and instead report feeling more irritable and angry. Often, when depressed, people feel

worthless and excessively guilty. They withdraw from activities that they normally enjoy and spend more time alone. Changes in appetite and sleeping habits (more or less than normal) are common. People with depression may experience fatigue, having low energy, and also feel restless. Physical aches and pains with no associated reason may occur, like muscle, stomach, or headaches. Cognitive functioning, such as attention, concentrating, memory, and decision-making, may be impaired. And while not necessary for a depression diagnosis, thoughts of death or suicide may be an issue.

Teens with depression may sulk, get into trouble at school, be negative and irritable, and feel misunderstood. It can be difficult to determine whether an adolescent is depressed or just "being a teenager." Consider how long the symptoms have been present, how severe they are, and how different the teen is acting from his or her usual self. Teens with depression may also have other disorders such as anxiety, eating disorders, or substance abuse.

Interactive Content

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this Interactive Content online

Video 5.7.4. Adolescent Depression provides information on identifying symptoms of depression in teens and how to respond to concerns.

The figure below shows the prevalence of major depressive episodes among U.S. adolescents in 2017. An estimated 3.2 million adolescents aged 12 to 17 in the United States had at least one major depressive episode. This number represented 13.3% of the U.S. population aged 12 to 17. The prevalence of major depressive episodes was higher among adolescent females (20.0%) compared to males (6.8%). The prevalence of major depressive episode was highest among adolescents reporting two or more races (16.9%).

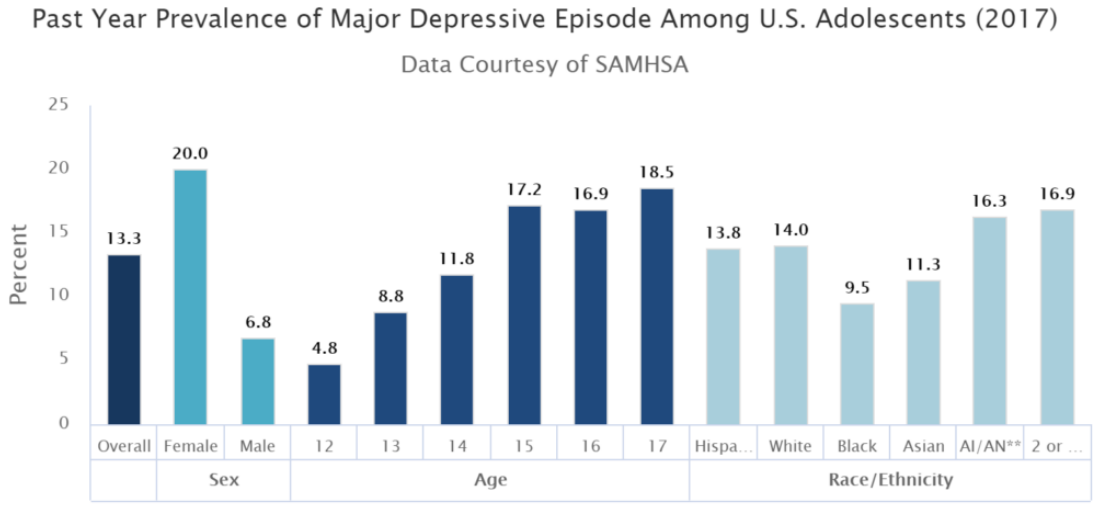


Figure 5.7.2. Prevalence of major depressive episode among US adolescents (2017). Data from SAMHSA.

Causes of depression include many factors such as genetics and early childhood experiences that predate adolescence, but puberty may push vulnerable children, especially girls, into despair. During puberty, the rate of major depression more than doubles to an estimated 13%, affecting about one in five girls and one in ten boys. The gender difference occurs for many reasons, biological and cultural (Uddin et al., 2010).

Developmental models focus on interpersonal contexts in both childhood and adolescence that foster depression and anxiety

(e.g., Rudolph, 2009). Family adversity, such as abuse and parental psychopathology during childhood, sets the stage for social and behavioral problems during adolescence. Adolescents with such problems generate stress in their relationships (e.g., by resolving conflict poorly and excessively seeking reassurance) and select into more maladaptive social contexts (e.g., "misery loves company" scenarios in which depressed youths select other depressed youths as friends and then frequently co-ruminate as they discuss their problems, exacerbating negative affect and stress). These processes are intensified for girls compared with boys because girls have more relationship-oriented goals related to intimacy and social approval, leaving them more vulnerable to disruption in these relationships. Anxiety and depression then exacerbate problems in social relationships, which in turn contribute to the stability of anxiety and depression over time.

Depression, even in the most severe cases, can be treated. The earlier that treatment can begin, the more effective it is. Depression is usually treated with medications, psychotherapy, or a combination of the two. An estimated 19.6% received care by a mental health professional alone, and another 17.9% received combined care by a mental health professional and medication treatment. Treatment with medication alone was least common (2.4%). Approximately 60.1% of adolescents with major depressive episode did not receive treatment.

Antidepressants are medicines that treat depression. They may help improve the way the brain uses certain chemicals that control mood or stress. Trying several different antidepressant medicines may be necessary before finding the one that improves symptoms and has manageable side effects. Antidepressants take time – usually 2 to 4 weeks – to work, and often, symptoms such as sleep, appetite, and concentration problems improve before mood lifts, so it is important to give medication a chance before reaching a conclusion about its effectiveness.

Several types of psychotherapy (also called "talk therapy" or, in a less specific form, counseling) can help people with depression. Examples of evidence-based approaches specific to the treatment of depression include cognitive-behavioral therapy (CBT), interpersonal therapy (IPT), and problem-solving therapy. CBT can help an individual with depression change negative thinking and interpret the environment and interactions in a positive, realistic way. IPT is designed to help an individual understand and work through troubled relationships or major issues that may cause depression or make it worse.

Teenagers usually rely on parents, teachers, or other caregivers to recognize their suffering and get them the treatment they need. Many teens don't know where to go for mental health treatment or believe that treatment won't help. Others don't get help because they think depression symptoms may be just part of the typical stress of school or being a teen. Some teens worry about what other people will think if they seek mental health care.

Self-Directed Violence

Self-directed violence (SDV) encompasses a range of violent behaviors, including acts of fatal and nonfatal suicidal behavior, and non-suicidal self-injury (i.e., behaviors where the intention is not to kill oneself, as in self-mutilation). Recognizing signs of self-directed violence and interventions to help people engaging in this behavior can save a life and help get them treatment.

Non-suicidal self-injury (NSSI), also referred to as self-harm, self-mutilation, or cutting, is a "deliberate, self-inflicted injury without suicidal intent or for socially sanction purposes (such as tattoos or piercings). NSSI is most often associated with 'cutting,' but means of self-harm often also include scratching, punching, punching oneself, banging objects with the intention of injury, biting, tearing of the skin, or burning. The location of the injury may also be an indicator of the severity of the psychological disturbance. Injuries to the face, eye, jugular, or genitals may be more concerning. Although not a suicide attempt, NSSI is associated with suicide and can result in an accidental fatality (Whitlock, 2010).

The average age of the first NSSI is between 11 and 15 years old. The prevalence of at least one incident NSSI is estimated to be 12-37% in high school populations and 12 to 20% in late adulthood and early adulthood cohorts, with 6-7% of adolescents reported repetitive NSSI in the last year. Of those reporting repetitive incidents, 40% reported stopping the behavior within a year of starting, and the vast majority (79.8%) stopped within five years (Whitlock, 2010).

While we might presume that NSSI behavior is associated with mental illness, like depression and anxiety, that is not always the case. Forty-four percent of people that engage in common NSSI do not have any co-morbidity. This type of NSSI includes self-injurious behaviors that are (1) compulsive or ritualistic (like trichotillomania), (2) episodic or occasional, with no identification as a person that self-harms, (3) repetitive with a self-harming identity. Common NSSI can be mild, moderate, or severe, depending on the severity of the injuries (Whitlock, 2010).

The reasons for NSSI are psychological, social, and biological and often step from a history of childhood adversity, comorbid psychological disorders, and emotional dysregulation. The psychological reasons are the most common and involve reducing

psychological pain, expressing distress, and distracting oneself from other negative stimuli. Fewer teens report social reasons for NSSI, such as seeking attention or copying peers. Social factors, like peer reinforcement of the behavior, can increase the likelihood of repetitive NSSI. Those reporting “getting a rush” or “feeling normal” from NSSI may have biological reasons for the behavior. These individuals may have chronically low levels of certain neurotransmitters in their brains. The neurochemical response to injury may bring these neurotransmitter levels to a more normal level and help them regulate emotions. This may be the reason that some people are dependent on NSSI (Whitlock, 2010).

The correlation between NSSI and suicide-related behaviors is well known, but the nature of that relationship is rather paradoxical. Moving from NSSI to suicide-related behaviors may appear to be a predictable progression in severity—without intervention, those engaged in NSSI may get worse and eventually become suicidal. However, experts agree that NSSI may actually help alleviate the distress that could lead to suicide-related behavior, at least temporarily. NSSI could be a tool for coping with distress and avoid suicide (Whitlock, 2010).

In 2017, suicide was the second leading cause of death for people aged 10-19. After a stable period from 2000 to 2007, suicide death rates for teens are now increasing. Distressing thoughts about killing oneself become most common at about age 15 (Berger, 2019) and can lead to a variety of suicide-related behaviors.

Suicide-related behaviors include the following:

- **Suicide:** Death caused by self-directed injurious behavior with any intent to die.
- **Suicide attempt:** A non-fatal self-directed potentially injurious behavior with any intent to die as a result of the behavior. A suicide attempt may or may not result in injury.
- **Suicidal ideation:** Thinking about, considering, or planning for suicide.

Suicide-related behavior is complicated and rarely the result of a single source of trauma or stress. Youth who are at increased risk for suicide-related behavior are dealing with a complex interaction of multiple relationships (peer, family, or romantic), mental health, and school stressors. Often, people who engage in suicide-related behavior experience overwhelming feelings of helplessness and hopelessness. Involvement with bullying behavior is one stressor that may significantly contribute to feelings of helplessness and hopelessness that raise the risk of suicide.

Youth are at higher risk for suicide-related behaviors if they experienced violence, including child abuse, bullying, or sexual violence, and cannot cope with problems in healthy ways and solve problems peacefully. Teens with disabilities, learning differences, sexual/gender identity differences, or cultural differences are often most vulnerable to being bullied. Teens who report frequently bullying others are at high, long-term risk for suicide-related behavior. Youth who report both being bullied and bullying others (sometimes referred to as bully-victims) have the highest rates of negative mental health outcomes, including depression, anxiety, and thinking about suicide.

The behaviors listed below may be signs that someone is thinking about suicide.

- Talking about wanting to kill themselves or making a plan to kill themselves
- Talking about feeling empty, hopeless, or having no reason to live
- Talking about great guilt or shame
- Talking about feeling trapped or feeling that there are no solutions
- Feeling unbearable pain (emotional pain or physical pain)
- Talking about being a burden to others
- Using alcohol or drugs more often
- Acting anxious or agitated
- Withdrawing from family and friends
- Changing eating and/or sleeping habits
- Showing rage or talking about seeking revenge
- Taking great risks that could lead to death, such as driving extremely fast
- Talking or thinking about death often
- Displaying extreme mood swings, suddenly changing from very sad to very calm/happy
- Giving away important possessions
- Saying goodbye to friends and family
- Putting affairs in order, making a will

If these warning signs apply to you or someone you know, get help as soon as possible, particularly if the behavior is new or has increased recently. Call the National Suicide Prevention Lifeline (Lifeline) at 1-800-273-TALK (8255), or text the Crisis Text Line

(text HELLO to 741741). Both services are free and available 24 hours a day, seven days a week. The following recommendations are five action steps to help someone in emotional pain:

- ASK: “Are you thinking about killing yourself?” It’s not an easy question, but studies show that asking at-risk individuals if they are suicidal does not increase suicides or suicidal thoughts.
- KEEP THEM SAFE: Reducing a suicidal person’s access to highly lethal items or places is an important part of suicide prevention. While this is not always easy, asking if the at-risk person has a plan and removing or disabling the lethal means can make a difference.
- BE THERE: Listen carefully and learn what the individual is thinking and feeling. Research suggests acknowledging and talking about suicide may reduce rather than increase suicidal thoughts.
- HELP THEM CONNECT: Save the National Suicide Prevention Lifeline’s (1-800-273-TALK (8255)) and the Crisis Text Line’s number (741741) in your phone, so it’s there when you need it. You can also help make a connection with a trusted individual like a family member, friend, spiritual advisor, or mental health professional.
- STAY CONNECTED: Staying in touch after a crisis or after being discharged from care can make a difference. Studies have shown the number of suicide deaths goes down when someone follows up with the at-risk person.



Figure 5.7.3. Five action steps for helping someone in emotional pain.

https://assessments.lumenlearning.co...essments/16622

Candela Citations

CC licensed content, Original

- Behavioral and Psychological Adjustment. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...tment/%20u200e. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Any Anxiety Disorder. **Provided by**: National Institute of Mental Health [NIMH]. **Retrieved from**: https://www.nimh.nih.gov/health/stat...ml#part_155096. **License**: CC0: No Rights Reserved
- Anxiety Disorders. **Provided by**: National Institute of Mental Health [NIMH]. **Retrieved from**: https://www.nimh.nih.gov/health/topi...ml#part_145338. **License**: CC0: No Rights Reserved
- Behavioral and Psychological Adjustment. **Authored by**: Tera Jones. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...al-adjustment/. **License**: CC BY: Attribution
- Depression: What You Need to Know. **Provided by**: National Institute of Mental Health [NIMH]. **Retrieved from**: https://www.nimh.nih.gov/health/publ...dex.shtml#pub3. **License**: CC0: No Rights Reserved

- Major Depression. **Provided by**: National Institute of Mental Health [NIMH]. **Retrieved from**: https://www.nimh.nih.gov/health/stat...ml#part_155031. **License**: CC0: No Rights Reserved
- Self-Directed Violence Surveillance. **Provided by**: Centers for Disease Control and Prevention [CDC]. **Retrieved from**: https://www.cdc.gov/violencepreventi...Violence-a.pdf. **License**: CC0: No Rights Reserved
- Substance Use Screening and Intervention Implementation Guide. **Authored by**: American Academy of Pediatrics [AAP]. **Provided by**: Centers for Disease Control and Prevention [CDC]. **Retrieved from**: https://www.aap.org/en-us/Documents/...ementation.pdf. **License**: CC0: No Rights Reserved
- Suicide Prevention. **Provided by**: National Institute of Mental Health [NIMH]. **Retrieved from**: https://www.nimh.nih.gov/health/topi...on/index.shtml. **License**: CC0: No Rights Reserved
- Suicide Rising Across the US. **Provided by**: Centers for Disease Control [CDC]. **Retrieved from**: https://www.cdc.gov/vitalsigns/pdf/v...-suicide-H.pdf. **License**: CC0: No Rights Reserved
- Teen Depression. **Provided by**: National Institute of Mental Health [NIMH]. **Retrieved from**: https://www.nimh.nih.gov/health/publ...on/index.shtml. **License**: CC0: No Rights Reserved
- Teenage Drivers. **Authored by**: Martha Lally and Suzanne Valentine-French. **Provided by**: College of Lake County Foundation. **Retrieved from**: http://dept.clcillinois.edu/psy/Life...evelopment.pdf. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- The Relationship between Bullying and Suicide. **Provided by**: Center for Disease Control [CDC]. **Retrieved from**: https://www.cdc.gov/violencepreventi...on-final-a.pdf. **License**: CC0: No Rights Reserved
- Behavior or Conduct Problems in Children. **Provided by**: Center for Disease Control [CDC]. **Retrieved from**: https://www.cdc.gov/childrensmentalh.../behavior.html. **License**: CC0: No Rights Reserved

CC licensed content, Specific attribution

- Adolescent Substance Use, Addiction, and Treatment: Segment 1. **Authored by**: Dr. Sarah Bagley. **Provided by**: Youth.gov. **Retrieved from**: https://youtu.be/mBp1ah-ZLTM. **License**: CC0: No Rights Reserved

All rights reserved content

- The Prevalence of Mental Illness in Youth. **Authored by**: McKenna Knapp. **Provided by**: TedX Talks. **Retrieved from**: https://youtu.be/UG1_BQ5P9dA. **License**: All Rights Reserved
- Fight, Flight, Freeze--Anxiety Explained for Teens. **Provided by**: Anxiety Canada. **Retrieved from**: https://youtu.be/rpolpKTWrp4. **License**: All Rights Reserved
- Adolescent Depression. **Authored by**: A.D.A.M.. **Provided by**: University of Florida Health. **Retrieved from**: https://ufhealth.org/recognizing-teen-depression. **License**: All Rights Reserved

Public domain content

- Program Profile: Drug Abuse Resistance Education (DARE) (1983-2009). **Provided by**: National Institute of Justice. **Retrieved from**: https://crimesolutions.ojp.gov/ratedprograms/99#em. **License**: Public Domain: No Known Copyright

This page titled 5.6: Behavioral and Psychological Adjustment is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

amygdala: part of the limbic system in the brain, which is involved with emotions and emotional responses and is particularly active during puberty

dopamine: a neurotransmitter in the brain that plays a role in pleasure and the reward system; increases in the limbic system and later in the prefrontal cortex during adolescence

frontal lobes: the parts of the brain involved in impulse control, planning, and higher-order thinking; still developing in adolescence

limbic system: structures in the brain (including the amygdala) that involve processing emotional experience and social information and determining rewards and punishments; develops years before the prefrontal cortex

melatonin: sleep hormone whose levels rise later at night and decrease later in the morning for teens, compared to children and adults

myelination: insulation of neurons' axons with a fatty substance (myelin sheath) that helps speed up the processing of information; myelination starts to increase in the prefrontal cortex during adolescence

prefrontal cortex: part of the frontal lobes, involved with decision making, cognitive control, and other higher-order functions; prefrontal cortex develops further during adolescence

serotonin: "calming chemical," a neurotransmitter in the brain involved with the regulation of mood and behavior; serotonin levels increase in the limbic system during adolescence

synaptic pruning: connections in the brain that are not used much are lost so that other connections can be strengthened; this pruning happens with prefrontal cortex connections in adolescence

major depression: feelings of hopelessness, lethargy, and worthlessness that last two weeks or more

suicide: the act of intentionally causing one's own death

suicidal ideation: thinking about suicide, usually with some serious emotional and intellectual or cognitive overtones

This page titled 5.7: Glossary is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

6: COGNITIVE CHANGES DURING ADOLESCENCE

Learning Objectives

- Describe the cognitive changes that occur during adolescence
- Explain Piaget's stage theory as it applies to adolescents
- Describe social cognition as it applies to adolescent thinking and behavior
- Explain Vygotsky's theory
- Describe the various aspects of the information processing approach and how it applies to adolescents
- Differentiate the three theories of intelligence

Adolescence is a time of rapid cognitive development. Biological changes in brain structure and connectivity in the brain interact with increased experience, knowledge, and changing social demands to produce rapid cognitive growth. These changes generally begin at puberty or shortly thereafter, and some skills continue to develop as an adolescent ages. Development of executive functions, or cognitive skills that enable the control and coordination of thoughts and behavior, are generally associated with the prefrontal cortex area of the brain. The thoughts, ideas, and concepts developed during this period of life greatly influence one's future life and play a major role in character and personality formation.

There are two primary perspectives on adolescent thinking: constructivist and information-processing. The **constructivist perspective**, based on the work of Piaget, takes a quantitative, stage-theory approach. This view hypothesizes that adolescents' cognitive improvement is relatively sudden and drastic. The **information-processing perspective** derives from the study of artificial intelligence and explains cognitive development in terms of the growth of specific components of the overall process of thinking, such as attention, memory, processing speed, and metacognition.

6.1: Constructivist Theories

6.2: Psychological Constructivism

6.3: Social Constructivism

6.4: Information Processing Theories

6.5: Intelligence

6.6: Glossary

This page titled 6: Cognitive Changes during Adolescence is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

6.1: Constructivist Theories

Constructivism is a perspective on learning focused on how people actively create (or "construct") knowledge out of experiences. Constructivist models of learning differ about how much a learner constructs knowledge independently, compared to how much he or she takes cues from people who may be more of an expert and who help the learner's efforts (Fosnot, 2005; Rockmore, 2005). These are called **psychological constructivism** (changes in thinking resulting from individual experiences) and **social constructivism** (changes in thinking due to assistance from others), even though both versions are, in a sense, explanations about thinking within individuals.

The Piagetian version of psychological constructivist learning is rather "individualistic," in the sense that it does not say much about how other people involved might assist with learning. Parents and teachers are left lingering on the sidelines with few significant responsibilities for helping learners to construct knowledge. Piaget did recognize the importance of helping others in his theory, calling the process of support or assistance social transmission; however, he did not emphasize this aspect of constructivism. Piaget was more interested in what learners could figure out on their own (Salkind, 2004). Partly for this reason, his theory is often considered less about learning and more about development, which is a long-term change in a person resulting from multiple experiences. For the same reason, educators have often found Piaget's ideas especially helpful for thinking about students' readiness to learn.

Unlike Piaget's rather individually oriented version of constructivism, some psychologists have focused on the interactions between a learner and more knowledgeable individuals. One early expression of this viewpoint came from the American psychologist Jerome Bruner (1960, 1966, 1996), who became convinced that students could usually learn more than had been traditionally expected as long as they were given appropriate guidance and resources. He called such support instructional scaffolding— literally meaning a temporary framework, like one used in constructing a building, that allows a much stronger structure to be built within it. The reason for such a bold assertion was Bruner's belief in scaffolding—his belief in the importance of providing guidance in the right way and at the right time. When scaffolding is provided, students seem more competent and "intelligent," and they learn more.

Similar ideas were proposed by Lev Vygotsky (1978), whose writing focused on how a learner's thinking is influenced by relationships with others who are more capable, knowledgeable, or expert than the learner. Vygotsky proposed that when a person is learning a new skill or solving a new problem, he or she can perform better if accompanied and helped by an expert than if performing alone—though still not as well as the expert.

The social version of constructivism, however, highlights the responsibility of the expert for making learning possible. He or she must not only have knowledge and skill but also know how to arrange experiences that make it easy and safe for learners to gain knowledge and skill themselves. In addition to knowing what is to be learned, the expert (i.e., the teacher) also has to break the content into manageable parts, offer the parts in a sensible sequence, provide for suitable and successful practice, bring the parts back together again at the end, and somehow relate the entire experience to knowledge and skills already meaningful to the learner.

Candela Citations

CC licensed content, Original

- Constructivism. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...ories/%20u200e. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Educational Psychology. **Authored by**: Kelvin Seifert and Rosemary Sutton. **Provided by**: The Saylor Foundation. **Retrieved from**: https://courses.lumenlearning.com/ed...onalpsychology. **License**: CC BY: Attribution

This page titled 6.1: Constructivist Theories is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

6.2: Psychological Constructivism

In chapter 3, we briefly reviewed Piaget and his cognitive development theory. Piaget believed that when we are faced with new information that we experience a cognitive disequilibrium. In response, we are continuously trying to regain cognitive homeostasis through adaptation. Piaget also proposed that through maturation we progress through four stages of cognitive development. As Piaget believed that adolescence was the start of the fourth stage, we will focus on the cognitive developments that occur during this stage.

Adaptation

When it comes to maintaining cognitive equilibrium, young people have much more of a challenge because they are constantly being confronted with new situations. All of this new information needs to be organized. The framework for organizing information is referred to as a **schema.** We develop schemata through the processes of adaptation. Adaptation can occur through assimilation and accommodation.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 6.3.1 *Semantic Networks and Spreading Activation* explains the creation and use of schemas.

Sometimes when we are faced with new information, we can simply fit it into our current schema; this is called **assimilation.** For example, a student is given a new math problem in class. They use previously learned strategies to try to solve the problem. While the problem is new, the process of solving the problem is something familiar to the student. The new problem fits into their current understanding of the math concept.

Not all new situations fit into our current framework and understanding of the world. In these cases, we may need **accommodation**, *w*hich is expanding the framework of knowledge to accommodate the new situation. If the student solving the math problem could not solve it because they were missing the strategies necessary to find the answer, they would first need to learn these strategies, and then they could solve the problem.

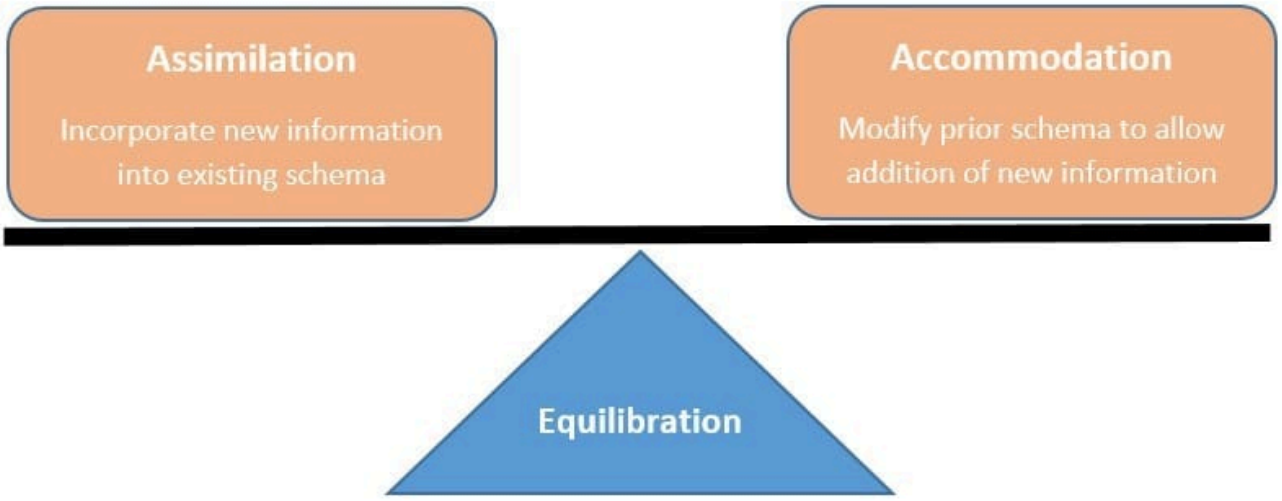


Figure 6.3.1. Model of Piaget's adaptation theory.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 6.3.2. *Schemas, Assimilation, and Accommodation* explains Piaget's theory of constructing schemas through adaptation.

Piaget's Stages of Cognitive Development

Piaget was a **psychological constructivist**: in his view, learning proceeded by the interplay of assimilation (adjusting new experiences to fit prior concepts) and accommodation (adjusting concepts to fit new experiences). The to-and-fro of these two processes leads not only to short-term learning but also to long-term **developmental change**. The long-term developments are really the main focus of Piaget's cognitive theory.

After observing children closely, Piaget proposed that cognition developed through distinct stages from birth through the end of adolescence. By stages he meant a sequence of thinking patterns with four key features:

1. They always happen in the same order.
2. No stage is ever skipped.
3. Each stage is a significant transformation of the stage before it.
4. Each later stage incorporated the earlier stages into itself.

Piaget proposed four major stages of cognitive development and called them (1) sensorimotor intelligence, (2) preoperational thinking, (3) concrete operational thinking, and (4) formal operational thinking. Each stage is correlated with an age period of childhood, but only approximately.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 6.3.3. *Piaget's Stages of Cognitive Development* explains the structure of the four stages and major cognitive developments associated with each stage.

Sensorimotor Stage



According to Piaget, children are in the sensorimotor stage from birth until the age of 2. This first stage is defined as the period when infants "think" by means of their senses and motor actions. As every new parent will attest, infants continually touch, manipulate, look, listen to, and even bite and chew objects. According to Piaget, these actions allow them to learn about the world and are crucial to their early cognitive development.

The infant's actions allow the child to represent (or construct simple concepts of) objects and events. A toy animal may be just a confusing array of sensations at first. However, by looking, feeling, and manipulating it repeatedly, the child gradually organizes her sensations and actions into a stable concept, a *toy animal*. The representation acquires a permanence lacking in the individual experiences of the object, which are constantly changing. Because the representation is stable, the child "knows," or at least believes, that toy animal exists even if the actual *toy animal* is temporarily out of sight. Piaget called this sense of stability **object permanence**, a belief that objects exist whether or not they are actually present. It is a major achievement of sensorimotor development, and marks a qualitative transformation in how older infants (24 months) think about experience compared to younger infants (6 months).

During much of infancy, of course, a child can only barely talk, so sensorimotor development initially happens without the support of language. It might, therefore, seem hard to know what infants are thinking, but Piaget devised several simple, but clever, experiments to get around their lack of language. The results of these experiments suggest that infants do indeed represent objects even without being able to talk (Piaget, 1952). In one, for example, he simply hid an object (like a toy animal) under a blanket. He found that doing so consistently prompts older infants (18–24 months) to search for the object, but fails to prompt younger infants (less than six months) to do so. 'Something' motivates the search by the older infant even without the benefit of language, and the 'something' is presumed to be a permanent concept or representation of the object.

Preoperational Stage



In the **preoperational stage**, children ages 2 to 7 use their new ability to represent objects in a wide variety of activities, but they do not yet do it in ways that are organized or fully logical. One of the most obvious examples of this kind of cognition is **dramatic play**, the improvised make-believe of preschool children. If you have ever had responsibility for children of this age, you have likely witnessed such play. Ashley holds a plastic banana to her ear and says: "Hello, Mom? Can you be sure to bring me my baby doll? OK!" Then she hangs up the banana and pours tea for Jeremy into an invisible cup. Jeremy giggles at the sight of all of this and exclaims: "Rinnng! Oh Ashley, the phone is ringing again! You better answer it." And on it goes.

In a way, children immersed in make-believe seem "mentally insane," in that they do not think realistically. But they are not truly insane because they have not really taken leave of their senses. At some level, Ashley and Jeremy always know that the banana is still a banana and not *really* a telephone; they are merely *representing* it as a telephone. They are thinking on two levels at once—one imaginative and the other realistic. This dual processing of experience makes dramatic play an early example of **metacognition**, or reflecting on and monitoring of thinking itself. Metacognition is a highly desirable skill for success in school, one that teachers often encourage (Bredekamp & Copple, 1997; Paley, 2005). Partly for this reason, teachers of young children (preschool, kindergarten, and even first or second grade) often make time and space in their classrooms for dramatic play, and sometimes even participate in it themselves to help develop the play further.

Concrete Operational Stage



As children continue into elementary school, they become able to represent ideas and events more flexibly and logically. Their rules of thinking still seem very basic by adult standards and usually operate unconsciously, but they allow children to solve problems more systematically than before, and therefore to be successful with many academic tasks. In the concrete operational stage, for example, a child may unconsciously follow the rule: "If nothing is added or taken away, then the amount of something stays the same." This simple principle helps children to understand certain arithmetic tasks, such as in adding or subtracting zero from a number, as well as to do certain classroom science experiments, such as ones involving judgments of the amounts of liquids when mixed. Piaget called this period the **concrete operational stage** because children mentally "operate" on concrete

objects and events. They are not yet able, however, to operate (or think) systematically about *representations* of objects or events. Manipulating representations is a more abstract skill that develops later, during adolescence.

Concrete operational thinking differs from preoperational thinking in two ways, each of which renders children more skilled as students. One difference is **reversibility**, or the ability to think about the steps of a process in any order. Imagine a simple science experiment, for example, such as one that explores why objects sink or float by having a child place an assortment of objects in a basin of water. Both the preoperational and concrete operational child can recall and describe the steps in this experiment, but only the concrete operational child can recall them *in any order*. This skill is beneficial for any task involving multiple steps—a common feature of tasks in the classroom. In teaching new vocabulary from a story, for another example, a teacher might tell students: "First make a list of words in the story that you do not know, then find and write down their definitions, and finally get a friend to test you on your list." These directions involve repeatedly remembering to move back and forth between a second step and a first—a task that concrete operational students—and most adults—find easy, but that preoperational children often forget to do or find confusing. If the younger children are to do this task reliably, they may need external prompts, such as having the teacher remind them periodically to go back to the story to look for more unknown words

The other new feature of thinking during the concrete operational stage is the child's ability to **decenter** or focus on more than one feature of a problem at a time. There are hints of decentration in preschool children's dramatic play, which requires being aware on two levels at once—knowing that a banana can be both a banana and a "telephone." The decentration of the concrete operational stage is more deliberate and conscious than preschoolers' make-believe. Now the child can attend to two things at once quite purposely. Suppose you give students a sheet with an assortment of subtraction problems on it and ask them to do this: "Find all of the problems that involve two-digit subtraction *and* that involve borrowing from the next column. Circle and solve *only* those problems." Following these instructions is quite possible for a concrete operational student (as long as they have been listening!) because the student can attend to the two subtasks simultaneously—finding the two-digit problems *and* identifying which involve borrowing.

In real classroom tasks, reversibility and decentration often happen together. A well-known example of joint presence is Piaget's experiments with **conservation**, the belief that an amount or quantity stays the same even if it changes apparent size or shape (Piaget, 2001; Matthews, 1998). Imagine two identical balls made of clay. Any child, whether preoperational or concrete operational, will agree that the two indeed have the same amount of clay in them simply because they look the same. However, if you now squish one ball into a long, thin "hot dog," the preoperational child is likely to say that the amount of that ball has changed—either because it is longer or because it is thinner, but at any rate, because it now looks different. The concrete operational child will not make this mistake, thanks to new cognitive skills of reversibility and decentration. For this child, the amount is the same because "you could squish it back into a ball again" (reversibility) and because "it may be longer, but it is also thinner" (decentration). Piaget would say the concrete operational child "has conservation of quantity."

The classroom examples described above also involve reversibility and decentration. As already mentioned, the vocabulary activity described earlier requires reversibility (going back and forth between identifying words and looking up their meanings). However, it can also be construed as an example of decentration. Furthermore, as mentioned, the arithmetic activity requires decentration (looking for problems that meet two criteria *and* also solving them). However, it can also be construed as an example of reversibility (going back and forth between subtasks, as with the vocabulary activity). Either way, the development of concrete operational skills support students in doing many basic academic tasks; in a sense, they make ordinary schoolwork possible.

Formal Operational Stage



In the fourth (and last) of the Piagetian stages, an adolescent becomes able to reason not only about tangible objects and

events, as younger children do, but also about hypothetical or abstract ones. Hence this stage is named the **formal operational** stage—the period when the individual can "operate" on "forms" or representations.

During the formal operational stage, adolescents can understand **abstract principles** that have no physical reference. They can now contemplate such abstract constructs as beauty, love, freedom, and morality. The adolescent is no longer limited by what can be directly seen or heard. Additionally, while younger children solve problems through trial and error, adolescents demonstrate **hypothetical-deductive reasoning**, which is developing hypotheses based on what might logically occur. They can think about all the possibilities in a situation beforehand, and then test them systematically (Crain, 2005). Now they can engage in real scientific thinking. Formal operational thinking also involves accepting hypothetical situations. Adolescents understand the concept of **transitivity**, which means that a relationship between two elements is carried over to other elements logically related to the first two, such as if A<B and B<C, then A<C (Thomas, 1979). For example, when asked: If Maria is shorter than Alicia and Alicia is shorter than Caitlyn, who is the shortest? Adolescents can answer the question correctly as they understand the transitivity involved.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 6.3.4. *Formal Operational Stage* explains some of the cognitive development consistent with formal operational thought.

Abstract and Hypothetical Thinking

One of the major premises of formal operational thought is the capacity to think of possibility, not just reality. Adolescents' thinking is less bound to concrete events than that of children; they can contemplate possibilities outside the realm of what currently exists. One manifestation of the adolescent's increased facility with thinking about possibilities is the improvement of skill in **deductive reasoning (also called top-down reasoning),** which leads to the development of **hypothetical thinking**. This development provides the ability to plan ahead, see the future consequences of an action, and provide alternative explanations of events. It also makes adolescents more skilled debaters, as they can reason against a friend's or parent's assumptions. Adolescents also develop a more sophisticated understanding of probability.

This appearance of more systematic, abstract thinking allows adolescents to comprehend the sorts of higher-order abstract logic inherent in puns, proverbs, metaphors, and analogies. Their increased facility permits them to appreciate how language can be used to convey multiple messages, such as satire, metaphor, and sarcasm (children younger than age nine often cannot comprehend sarcasm). This development also permits the application of advanced reasoning and logical processes to social and ideological matters such as interpersonal relationships, politics, philosophy, religion, morality, friendship, faith, fairness, and honesty.

Deductive Reasoning

https://youtu.be/YJyuy4B2aKU

Video 6.3.5. *Deductive Reasoning* demonstrates a Piagetian task that presents the child with a hypothetical situation and asks that they deduce what happens given this scenario. The first child is an elementary school-aged child. The second is an adolescent. You can see how these two are able to use hypothetical information differently to make predictions about what will happen next.

Intuitive and Analytic Thinking

Piaget emphasized the sequence of thought throughout four stages. Others suggest that thinking does not develop in sequence,

but instead, that advanced logic in adolescence may be influenced by intuition. Cognitive psychologists often refer to intuitive and analytic thought as the **dual-process model**, the notion that humans have two distinct networks for processing information (Kuhn, 2013.) **Intuitive thought** is automatic, unconscious, and fast, and it is more experiential and emotional.

In contrast, **analytic thought** is deliberate, conscious, and rational (logical). While these systems interact, they are distinct (Kuhn, 2013). Intuitive thought is easier, quicker, and more commonly used in everyday life. As discussed in the adolescent brain development section, the discrepancy between the maturation of the limbic system and the prefrontal cortex may make teens more prone to emotional, intuitive thinking than adults. As adolescents develop, they gain in logic/analytic thinking ability and sometimes regress, with social context, education, and experiences becoming significant influences. Simply put, being "smarter," as measured by an intelligence test, does not advance cognition as much as having more experience, in school and life (Klaczynski & Felmban, 2014).

Relativistic Thinking

Adolescents are more likely to engage in **relativistic thinking**—in other words, they are more likely to question others' assertions and less likely to accept information as absolute truth. Through experience outside the family circle, they learn that rules they were taught as absolute are relativistic. They begin to differentiate between rules crafted from common sense (do not touch a hot stove) and those that are based on culturally relative standards (codes of etiquette). This can lead to a period of questioning authority in all domains.

Formal Operational Thinking In the Classroom

School is a main contributor in guiding students towards formal operational thought. With students at this level, the teacher can pose hypothetical (or contrary-to-fact) problems: "What if the world had never discovered oil?" or "What if the first European explorers had settled first in California instead of on the East Coast of the United States?" To answer such questions, students must use hypothetical reasoning, meaning that they must manipulate ideas that vary in several ways at once and do so entirely in their minds.

The hypothetical reasoning that concerned Piaget primarily involved scientific problems. His studies of formal operational thinking therefore often look like problems that middle or high school teachers pose in science classes. In one problem, for example, a young person is presented with a simple pendulum, to which different amounts of weight can be hung (Inhelder & Piaget, 1958). The experimenter asks: "What determines how fast the pendulum swings: the length of the string holding it, the weight attached to it, or the distance that it is pulled to the side?" The young person is not allowed to solve this problem by trial-and-error with the materials themselves but must reason a way to the solution mentally. To do so systematically, he or she must imagine varying each factor separately, while also imagining the other factors that are held constant. This kind of thinking requires facility at manipulating mental representations of the relevant objects and actions—precisely the skill that defines formal operations.

As you might suspect, students with an ability to think hypothetically have an advantage in many kinds of schoolwork: by definition, they require relatively few "props" to solve problems. In this sense, they can in principle be more self-directed than students who rely only on concrete operations—certainly a desirable quality in the opinion of most teachers. Note, though, that formal operational thinking is desirable but not sufficient for school success, and that it is far from being the only way that students achieve educational success. Formal thinking skills do not ensure that a student is motivated or well-behaved, for example, nor does it guarantee other desirable skills. The fourth stage in Piaget's theory is really about a particular kind of formal thinking, the kind needed to solve scientific problems and devise scientific experiments. Since many people do not normally deal with such problems in the normal course of their lives, it should be no surprise that research finds that many people never achieve or use formal thinking fully or consistently, or that they use it only in selected areas with which they are very familiar (Case & Okomato, 1996). For teachers, the limitations of Piaget's ideas suggest a need for additional theories about development—ones that focus more directly on the social and interpersonal issues of childhood and adolescence.

Adolescent Egocentrism



Once adolescents can understand abstract thoughts, they enter a world of hypothetical possibilities and demonstrate **egocentrism** or a heightened self-focus. The egocentricity comes from attributing unlimited power to their own thoughts (Crain, 2005). Piaget believed it was not until adolescents took on adult roles that they would be able to learn the limits to their own thoughts.

David Elkind (1967) expanded on the concept of Piaget's adolescent egocentricity. Elkind theorized that the physiological changes that occur during adolescence result in adolescents being primarily concerned with themselves. Additionally, since adolescents fail to differentiate between what others are thinking and their own thoughts, they believe that others are just as fascinated with their behavior and appearance. This belief results in the adolescent anticipating the reactions of others, and consequently constructing an imaginary audience. "The **imaginary audience** is the adolescent's belief that those around them are as concerned and focused on their appearance as they themselves are" (Schwartz, Maynard, & Uzelac, 2008, p. 441). Elkind thought that the imaginary audience contributed to the self-consciousness that occurs during early adolescence. The desire for privacy and reluctance to share personal information may be a further reaction to feeling under constant observation by others.

Another important consequence of adolescent egocentrism is the **personal fable** or belief that one is unique, special, and invulnerable to harm. Elkind (1967) explains that because adolescents feel so important to others (imaginary audience), they regard themselves and their feelings as being special and unique. Adolescents believe that only they have experienced strong and diverse emotions, and therefore others could never understand how they feel. This uniqueness in one's emotional experiences reinforces the adolescent's belief of invulnerability, especially to death. Adolescents will engage in risky behaviors, such as drinking and driving or unprotected sex, and feel they will not suffer any negative consequences. Elkind believed that adolescent egocentricity emerges in early adolescence and declines in middle adolescence. However, recent research has also identified egocentricity in late adolescence (Schwartz et al., 2008).

Consequences of Formal Operational Thought

As adolescents are now able to think abstractly and hypothetically, they exhibit many new ways of reflecting on information (Dolgin, 2011). For example, they demonstrate greater **introspection** or thinking about one's thoughts and feelings. They begin to imagine how the world could be, which leads them to become **idealistic** or to insist upon high standards of behavior. Because of their idealism, they may become critical of others, especially adults in their life. Additionally, adolescents can demonstrate **hypocrisy**, or pretend to be what they are not. Since they can recognize what others expect of them, they will conform to those expectations for their emotions and behavior seemingly hypocritical to themselves. Lastly, adolescents can exhibit **pseudostupidity.** This is when they approach problems at a level that is too complex and they fail because the tasks are too simple. Their new ability to consider alternatives is not completely under control and they appear "stupid" when they are, in fact, bright, just not experienced.

https://assessments.lumenlearning.co...essments/16613

Beyond Formal Operational Thought: Postformal Thought

According to Piaget's theory, adolescents acquire formal operational thought and this is the last stage of cognitive development.

The hallmark of this type of thinking is the ability to think abstractly or to consider possibilities and ideas about circumstances never directly experienced. Thinking abstractly is only one characteristic of adult thought, however. If you compare a 15-year-old with someone in their late 30s, you would probably find that the latter considers not only what is possible but also what is likely. Why the change? The adult has gained experience and understands why possibilities do not always become realities. They learn to base decisions on what is realistic and practical, not idealistic, and can make adaptive choices. Adults are also not as influenced by what others think. This advanced type of thinking is referred to as **postformal thought** (Sinnott, 1998).

In addition to moving toward more practical considerations, thinking in early adulthood may also become more flexible and balanced. Abstract ideas that the adolescent believes in firmly may become standards by which the adult evaluates reality. Adolescents tend to think in **dichotomies**; ideas are true or false; good or bad; there is no middle ground. However, with experience, the adult comes to recognize that there are some right and some wrong in each position, some good or some bad in a policy or approach, some truth and some falsity in a particular idea. This ability to bring together salient aspects of two opposing viewpoints or positions is referred to as **dialectical thought** and is considered one of the most advanced aspects of postformal thinking (Basseches, 1984). Such thinking is more realistic because very few positions, ideas, situations, or people are completely right or wrong. So, for example, parents who were considered angels or devils by the adolescent eventually become just people with strengths and weaknesses, endearing qualities, and faults to the adult.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 6.3.6. *Perry's Stages of Intellectual Development* explains post-formal stages of cognitive development in adulthood.

Does Everyone Reach Formal Operational or Postformal Thought?

Formal operational thought is influenced by experience and education. Most people attain some degree of formal operational thinking but use formal operations primarily in the areas of their strongest interest (Crain, 2005). Even those that can use formal or postformal thought, they do not regularly demonstrate it. In some small villages and tribal communities, it is barely used at all. A possible explanation is that an individual's thinking has not been sufficiently challenged to demonstrate formal operational thought in all areas.

Some adults lead lives in which they are not challenged to think abstractly about their world. Many adults do not receive any formal education and are not taught to think abstractly about situations they have never experienced. Further, they are also not exposed to conceptual tools used to formally analyze hypothetical situations. Those who do think abstractly, in fact, may be able to do so more easily in some subjects than others. For example, psychology majors may be able to think abstractly about psychology, but be unable to use abstract reasoning in physics or chemistry. Abstract reasoning in a particular field requires a knowledge base that we might not have in all areas. Consequently, our ability to think abstractly depends to a large extent on our experiences.

https://assessments.lumenlearning.co...essments/16614

Candela Citations

CC licensed content, Original

- Psychological Constructivism . **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...agets-theories. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Lifespan Development. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/

wm...pandevelopment. **License**: CC BY: Attribution
- Educational Psychology. **Authored by**: Kelvin Seifert and Rosemary Sutton. **Provided by**: The Saylor Foundation. **Retrieved from**: https://courses.lumenlearning.com/ed...onalpsychology. **License**: CC BY: Attribution

CC licensed content, Specific attribution

- Schemas, Assimilation, and Accommodation. **Authored by**: Carole Yue. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/ig-SVifJUKw. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- Semantic Networks and Spreading Activation. **Authored by**: Carole Yue. **Provided by**: Khan Academy . **Retrieved from**: https://youtu.be/ig-SVifJUKw. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- Piaget's Stages of Cognitive Development. **Authored by**: Carole Yue. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/Jt3-PIC2nCs. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

All rights reserved content

- Formal Operational Stage . **Provided by**: Udacity. **Retrieved from**: https://youtu.be/hvq7tq2fx1Y. **License**: *All Rights Reserved*
- Deductive Reasoning. **Retrieved from**: https://youtu.be/YJyuy4B2aKU. **License**: *All Rights Reserved*
- Perry's Stages of Intellectual Development. **Provided by**: Student Success Space. **Retrieved from**: https://youtu.be/MbsqNn8O79o. **License**: *All Rights Reserved*

This page titled 6.2: Psychological Constructivism is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

6.3: Social Constructivism



Figure 6.4.1. Lev Vygotsky

Lev Vygotsky (1896-1934) was a Russian psychologist whose **sociocultural theory** emphasizes the importance of culture and interaction in the development of cognitive abilities. Vygotsky differed with Piaget in that he believed that a person has not only a set of abilities but also a set of potential abilities that can be realized if given the proper guidance from others. Vygotsky developed theories on teaching that have been adopted by educators today.

Like Piaget, Vygotsky acknowledged intrinsic development, but he argued that it is the language, writings, and concepts arising from the culture that elicit the highest level of cognitive thinking (Crain, 2005). He believed that social interactions with teachers and more learned peers could facilitate a learner's potential for learning. Without this interpersonal instruction, he believed learner's minds would not advance very far as their knowledge would be based only on their own discoveries.

Zone of Proximal Development and Scaffolding

Vygotsky's best-known concept is the **Zone of Proximal Development (ZPD). The** ZPD has been defined as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance, or in collaboration with more capable peers" (Vygotsky, 1978, p. 86). Vygotsky stated that learners should be taught in the ZPD. A good teacher or more-knowledgable-other (MKO) identifies a learner's ZPD and helps them stretch beyond it. Then the MKO gradually withdraws support until the learner can perform the task unaided. Other psychologists have applied the metaphor of scaffolds (the temporary platforms on which construction workers stand) to Vygotsky's theory. Scaffolding is the temporary support that a MKO gives a learner to do a task.

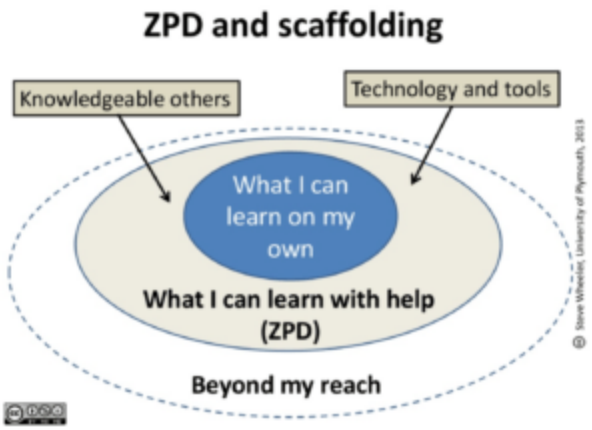


Figure 6.4.2. Model of Vygotsky's zone of proximal development.

Thought and Speech

Do you ever talk to yourself? Why? Chances are, this occurs when you are struggling with a problem, trying to remember something, or feel very emotional about a situation. Children talk to themselves too. Piaget interpreted this as **egocentric speech** or a practice engaged in because of a child's inability to see things from another's point of view. Vygotsky, however, believed that children talk to themselves in order to solve problems or clarify thoughts. As children learn to think in words, they do so aloud, referred to as **private speech**, speech meant only for one's self. Eventually, thinking out loud becomes thought accompanied by internal speech, and talking to oneself becomes a practice only engaged in when we are trying to learn something or remember something. This inner speech is not as elaborate as the speech we use when communicating with others (Vygotsky, 1962).

Vygotsky's Influence on Education

Vygotsky's theories have been extremely influential for education. Although Vygotsky himself never mentioned the term scaffolding, it is often credited to him as a continuation of his ideas pertaining to the way adults or other children can use guidance in order for a child to work within their ZPD. (The term scaffolding was first developed by Jerome Bruner, David Wood, and Gail Ross while applying Vygotsky's concept of ZPD to various educational contexts.)

Educators often apply these concepts by assigning tasks that students cannot do on their own, but which they can do with assistance; they should provide just enough assistance so that students learn to complete the tasks independently and then provide an environment that enables students to do harder tasks than would otherwise be possible. Teachers can also allow students with more knowledge to assist students who need more guidance. Especially in the context of collaborative learning, group members who have higher levels of understanding can help the less advanced members learn within their zone of proximal development.

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.4.1. *Vygotsky's Developmental Theory* introduces the applications of the theory in the classroom.

Contrasting Paget and Vygotsky

Piaget was highly critical of teacher-directed instruction believing that teachers who take control of the child's learning place the

child into a passive role (Crain, 2005). Further, teachers may present abstract ideas without the child's true understanding, and instead, they just repeat back what they heard. Piaget believed children must be given opportunities to discover concepts on their own. As previously stated, Vygotsky did not believe children could reach a higher cognitive level without instruction from more learned individuals. Who is correct? Both theories certainly contribute to our understanding of how children learn.

Candela Citations

CC licensed content, Original

- Social Constructivism. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...onstructivism/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Zone of Proximal Development & Scaffolding. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/fo...r/chapter/zpd/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

All rights reserved content

- Vygotsky's Developmental Theory. **Provided by**: Davidson Films. **Retrieved from**: https://youtu.be/InzmZtHuZPY. **License**: All Rights Reserved

This page titled 6.3: Social Constructivism is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

6.4: Information Processing Theories

Information Processing is *how individuals perceive, analyze, manipulate, use, and remember information*. Unlike Piaget's theory, this approach proposes that cognitive development is ongoing and gradual, not organized into distinct stages. The areas of basic cognitive changes generally occur in five areas:

- *Attention*. Improvements are seen in **selective attention**(the process by which one focuses on one stimulus while tuning out another), as well as **divided attention** (the ability to pay attention to two or more stimuli at the same time).
- *Memory*. Improvements are seen in working memory and long-term memory.
- *Processing Speed*. With maturation, children think more quickly. Processing speed improves sharply between age five and middle adolescence, levels off around age 15, and does not appear to change between late adolescence and adulthood.
- *Organization of Thinking*. As children mature, they are more planful, they approach problems with strategy, and are flexible in using different strategies in different situations.
- *Metacognition*. Older children can think about thinking itself. This often involves monitoring one's own cognitive activity during the thinking process. **Metacognition**provides the ability to plan ahead, see the future consequences of an action, and provide alternative explanations of events.

Attention

Changes in attention have been described by many as the key to changes in human memory (Nelson & Fivush, 2004; Posner & Rothbart, 2007). However, attention is not a unified function; it is comprised of sub-processes. Our ability to focus on a single task or stimulus while ignoring distracting information, called **selective attention**. There is a sharp improvement in selective attention from age six into adolescence (Vakil, Blachstein, Sheinman, & Greenstein, 2009). **Sustained attention** is the ability to stay on task for long periods. The ability to switch our focus between tasks or external stimuli is called **divided attention** or **multitasking, which** also improves into adolescence (Carlson, Zelazo, & Faja, 2013).

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.8.1. Attention explains the ways in which we may attend or fail to attend to stimuli.

Selective Attention

The ability with selective attention tasks improves through childhood and into adolescence. While children's selective attention may be inconsistent during middle childhood, adolescents demonstrate the ability to select and prioritize stimuli for attention reliably. The development of this ability is influenced by the child's temperament (Rothbart & Rueda, 2005), the complexity of the stimulus or task (Porporino, Shore, Iarocci & Burack, 2004), and may be dependent on whether the stimuli are visual or auditory (Guy, Rogers & Cornish, 2013). Guy et al. (2013) found that children's ability to attend to visual information selectively outpaced that of auditory stimuli. This change may explain why young children are not able to hear the voice of the teacher over the cacophony of sounds in the typical preschool classroom (Jones, Moore & Amitay, 2015). Jones and his colleagues found that 4 to 7 year-olds could not filter out background noise, especially when its frequencies were close in sound to the target sound. In comparison, teens often performed similarly to adults.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.8.2. Theories of Selective Attention explains how and why we attend to some stimuli and not others.

Sustained Attention

Most measures of sustained attention typically ask individuals to spend several minutes focusing on one task, while waiting for an infrequent event, while there are multiple distractors for several minutes. Young children can retain their visual and auditory attention for approximately 5 minutes if they are 5-years-old, 6 minutes if they are 6-years old, 7 minutes if they are 7-years-old, and so on. If a task is interesting or novel, the child may sustain attention substantially longer. Sustained attention improves to around age 10, then plateaus with only small improvements to adulthood. Common estimates of the attention span of healthy teenagers and adults range from 10 to 20 minutes. There is some debate as to whether attention is consistently sustained or whether people repeatedly choose to re-focus on the same thing (Raichle, 1999) This ability to renew attention permits people to 'pay attention' to things that last for more than a few minutes.

For time-on-task measurements, the type of activity used in the test affects the results, as people are generally capable of a longer attention span when they are doing something that they find enjoyable or intrinsically motivating (Raichle,1999). Attention is also increased if the person can perform the task fluently, compared to a person who has difficulty performing the task, or to the same person when he or she is just learning the task. Fatigue, hunger, noise, and emotional stress reduce the time focused on the task. After losing attention from a topic, a person may restore it by resting, doing a different kind of activity, changing mental focus, or deliberately choosing to re-focus on the first topic.

Divided Attention

Divided attention can be thought of in a couple of ways. We may look at how well people can multitask, performing two or more tasks simultaneously, or how people can alternate attention between two or more tasks. For example, walking and talking to a friend at the same time is multitasking, where trying to text while driving requires us to alternate attention between two tasks quickly.

Young children (age 3-4) have considerable difficulties in dividing their attention between two tasks and often perform at levels equivalent to our closest relative, the chimpanzee. However, by age five, they have surpassed the chimp (Hermann, Misch, Hernandez-Lloreda & Tomasello, 2015; Hermann & Tomasello, 2015). Despite these improvements, 5-year-olds continue to perform below the level of school-age children, adolescents, and adults. These skills continue to develop into adolescence.

Regardless of age, we have a limited capacity for attention, and the division of attention is confined to that limitation. Our ability to effectively multitask or alternate attention is dependent on the automaticity or complexity of the task, but are also influenced by conditions like anxiety, arousal, task difficulty, and skills (Sternberg & Sternberg, 2012). Research shows that when dividing attention, people are more apt to make mistakes or perform their tasks more slowly (Matlin, 2013). Attention must be divided among all of the component tasks to perform them.

Classical research on divided attention involved people performing simultaneous tasks, like reading stories while listening and writing something else, or listening to two separate messages through different ears. Subjects were often tested on their ability to learn new information while engaged in multiple tasks. More current research examines the performance of doing two tasks simultaneously (Matlin, 2013), such as driving while performing another task. This research reveals that the human attentional system has limits for what it can process. For examples, driving performance is worse while engaged in other tasks; drivers make more mistakes, brake harder and later, get into more accidents, veer into other lanes, and/or are less aware of their surroundings when engaged in the previously discussed tasks (Collet et al., 2009; Salvucci & Taatgen, 2008; Strayer & Drews, 2007).

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.8.3. The Spotlight Model of Attention and Our Ability to Multitask explains how we divide our attention to attend to different tasks or information.

Memory

Memory is an information processing system; therefore, we often compare it to a computer. **Memory** is the set of processes used to encode, store, and retrieve information over different periods of time.



Figure 3.8.1. Encoding involves the input of information into the memory system. Storage is the retention of encoded information. Retrieval, or getting the information out of memory and back into awareness, is the third function.

Encoding

We get information into our brains through a process called **encoding**, which is the input of information into the memory system. Once we receive sensory information from the environment, our brains label or code it. We organize the information with other similar information and connect new concepts to existing concepts. Encoding information occurs through automatic processing and effortful processing.

If someone asks you what you ate for lunch today, more than likely, you could recall this information quite easily. This is known as **automatic processing**, or the encoding of details like time, space, frequency, and the meaning of words. Automatic processing is usually done without any conscious awareness. Recalling the last time you studied for a test is another example of automatic processing. However, what about the actual test material that you studied? It probably required a lot of work and attention on your part in order to encode that information. This is known as **effortful processing**.

There are three types of encoding. The encoding of words and their meaning is known as **semantic encoding**. It was first demonstrated by William Bousfield (1935) in an experiment in which he asked people to memorize words. The 60 words were divided into 4 categories of meaning, although the participants did not know this because the words were randomly presented. When they were asked to remember the words, they tended to recall them in categories, showing that they paid attention to the meanings of the words as they learned them.

Visual encoding is the encoding of images, and **acoustic encoding** is the encoding of sounds, words in particular. To see how visual encoding works, read over this list of words: *car, level, dog, truth, book, value*. If you were asked later to recall the words from this list, which ones do you think you'd most likely remember? You would probably have an easier time recalling the words *car, dog,* and *book*, and a more difficult time recalling the words *level, truth,* and *value*. Why is this? Because you can recall images (mental pictures) more easily than words alone. When you read the words *car, dog,* and *book,* you created images of these things in your mind. These are concrete, high-imagery words. On the other hand, abstract words like *level, truth,* and *value* are low-imagery words. High-imagery words are encoded both visually and semantically (Paivio, 1986), thus building a more reliable memory.

Now let us turn our attention to acoustic encoding. You are driving in your car, and a song comes on the radio that you have not heard in at least ten years, but you sing along, recalling every word. In the United States, children often learn the alphabet through song, and they learn the number of days in each month through rhyme: "Thirty days hath September, / April, June, and November; / All the rest have thirty-one, / Save February, with twenty-eight days clear, / And twenty-nine each leap year." These lessons are easy to remember because of acoustic encoding. We encode the sounds the words make. This is one of the reasons why much of what we teach young children is done through song, rhyme, and rhythm.

Which of the three types of encoding do you think would give you the best memory of verbal information? Some years ago, psychologists Fergus Craik and Endel Tulving (1975) conducted a series of experiments to find out. Participants were given words along with questions about them. The questions required the participants to process the words at one of the three levels. The visual processing questions included such things as asking the participants about the font of the letters. The acoustic processing questions asked the participants about the sound or rhyming of the words, and the semantic processing questions asked the participants about the meaning of the words. After participants were presented with the words and questions, they were given an unexpected recall or recognition task.

Words that had been encoded semantically were better remembered than those encoded visually or acoustically. Semantic encoding involves a deeper level of processing than shallower visual or acoustic encoding. Craik and Tulving concluded that we process verbal information best through semantic encoding, especially if we apply what is called the self-reference effect. The **self-reference effect** is the tendency for an individual to have a better memory for information that relates to oneself in comparison to material that has less personal relevance (Rogers, Kuiper & Kirker, 1977). Could semantic encoding be beneficial to you as you attempt to memorize the concepts in this chapter?

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.8.4. Encoding Strategies discusses various encoding techniques that help us store information in memory.

Storage

Once the information has been encoded, we have to retain it somehow. Our brains take the encoded information and place it in storage. **Storage** is the creation of a permanent record of information.

In order for a memory to go into storage (i.e., long-term memory), it has to pass through three distinct stages: Sensory Memory, Short-Term Memory, and finally, Long-Term Memory. These stages were first proposed by Richard Atkinson and Richard Shiffrin (1968). Their model of human memory, called Atkinson-Shiffrin (A-S) or three-box model, is based on the belief that we process memories in the same way that a computer processes information.

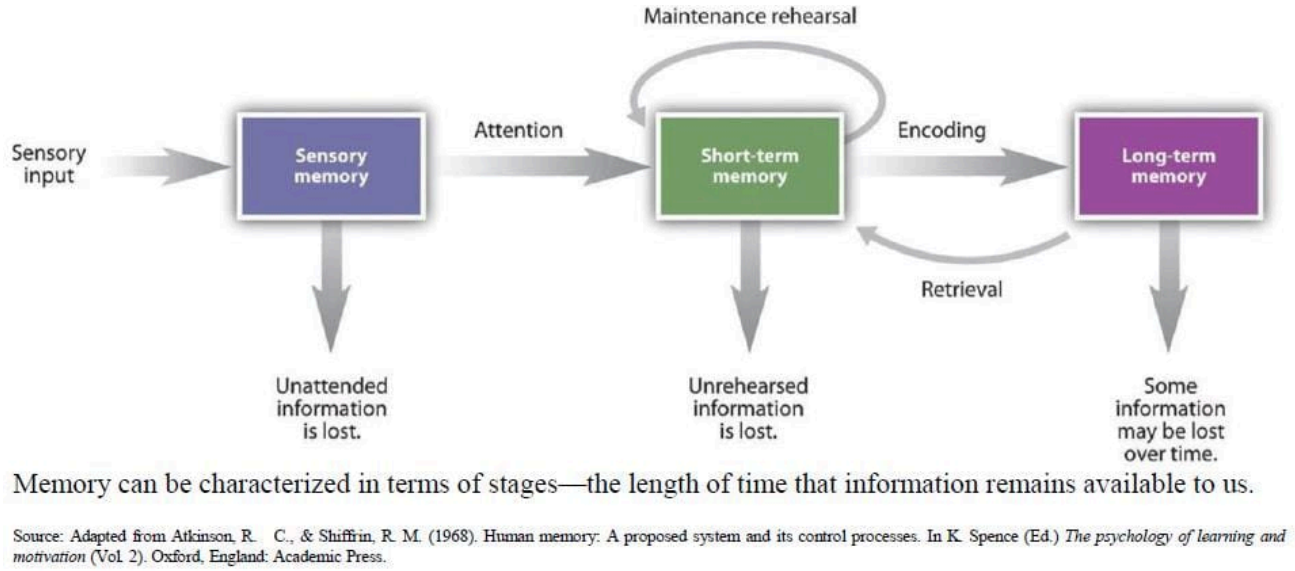


Figure 3.8.2. According to the Atkinson-Shiffrin model of memory, information passes through three distinct stages in order for it to be stored in long-term memory.

The three-box is just one model of memory. Others, such as Baddeley and Hitch (1974), have proposed a model where short-term memory itself has different forms. In this model, storing memories in short-term memory is like opening different files on a computer and adding information. The type of short-term memory (or computer file) depends on the type of information received. There are memories in visual-spatial form, as well as memories of spoken or written material, and they are stored in three short-term systems: a visuospatial sketchpad, an episodic buffer, and a phonological loop. According to Baddeley and Hitch, a central executive part of memory supervises or controls the flow of information to and from the three short-term systems.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.8.5. Information Processing Model: Sensory, Working, and Long Term Memory explains the three-box model of memory.

Sensory Memory

In the Atkinson-Shiffrin model, stimuli from the environment are processed first in **sensory memory**: storage of brief sensory events, such as sights, sounds, and tastes. It is very brief storage, *essentially long enough for the brain to register and start processing the information*. Sensory memory can hold visual information for about half of a second and auditory information for a few seconds. Unlike other cognitive processes, it seems that sensory memory does not change from infancy (Siegler, 1998). However, without the ability to encode the information, it fades from sensory memory quickly (Papalia et al., 2008). As children and adolescence become more capable of encoding, they can take more advantage of the information available to them in the sensory memory.

We are constantly bombarded with sensory information. We cannot absorb all of it, or even most of it. Moreover, most of it has no impact on our lives. For example, what was your professor wearing the last class period? As long as the professor was dressed appropriately, it does not matter what she was wearing. Sensory information about sights, sounds, smells, and even textures, which we do not view as valuable information, we discard. If we view something as valuable, the information will move into our short-term memory system.

One study of sensory memory researched the significance of valuable information on short-term memory storage. J. R. Stroop discovered a memory phenomenon in the 1930s: you will name a color more easily if it appears printed in that color, which is called the Stroop effect. In other words, the word “red” will be named more quickly, regardless of the color the word appears in, than any word that is colored red. Try an experiment: name the colors of the words you are given in Figure 3.8.3. Do not read the words, but say the color the word is printed in. For example, upon seeing the word “yellow” in green print, you should say “green,” not “yellow.” This experiment is fun, but it is not as easy as it seems.

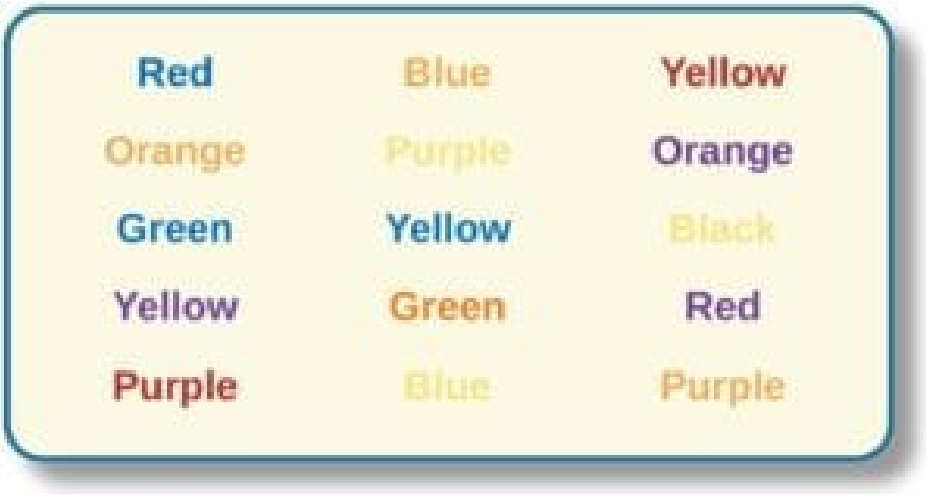


Figure 3.8.3. The Stroop effect describes why it is difficult for us to name a color when the word and the color of the word are different.

Short-Term (Working) Memory

Short-term memory (STM), also called **working memory**, is a temporary storage system that processes incoming sensory memory. Short-term memory is the bridge between information taken in through sensory memory and the more permanent storage of information in long-term memory. Information that is not moved along from short-term memory to long-term memory will be forgotten. Short-term memory is also called working memory because this is the system where the “work” of memory happens. If you are retrieving information from your long-term memory, you are moving it into your working memory, where you can think about that information.

Think of working memory as the information you have displayed on your computer screen—a document, a spreadsheet, or a web page. Then, the information in this memory system goes to long-term memory (you save it to your hard drive), or it is discarded (you delete a document or close a web browser). This step of **rehearsal**, the conscious repetition of information to be remembered, to move STM into long-term memory is called **memory consolidation**.

You may find yourself asking, “How much information can our memory handle at once?” To explore the capacity and duration of your short-term memory, have a partner read the strings of random numbers (Figure 3.8.4) out loud to you, beginning each string by saying, “Ready?” and ending each by saying, “Recall,” at which point you should try to write down the string of numbers from memory.

9754 68259 913825 5316842 86951372 719384273
6419 67148 648327 5963827 51739826 163875942

Figure 3.8.4. Work through this series of numbers using the recall exercise explained above to determine the longest string of digits that you can store.

Note the longest string at which you got the series correct. For most people, this will be close to 7. Recall is somewhat better for random numbers than for random letters (Jacobs, 1887), and also often slightly better for information we hear (acoustic encoding) rather than see (visual encoding) (Anderson, 1969).

Short-term or working memory often requires conscious effort and adequate use of attention to function effectively. As you read earlier, children struggle with many aspects of attention, and this greatly diminishes their ability to juggle several pieces of information in memory consciously. The capacity of working memory is the amount of information someone can hold in consciousness is smaller in young children than in older children and adults. The typical 5-year-old can hold only a four-digit number active. The typical adult and teenager can hold a seven-digit number active in their short-term memory. The capacity of working memory expands during middle and late childhood, and research has suggested that both an increase in processing speed and the ability to inhibit irrelevant information from entering memory are contributing to the greater efficiency of working memory during this age (de Ribaupierre, 2002). Changes in myelination and synaptic pruning in the cortex are likely behind the increase in processing speed and ability to filter out irrelevant stimuli (Kail, McBride-chang, Ferrer, Cho, & Shu, 2013).

Short-term memory can only hold information for a short period of time, without rehearsal. For a typical adolescent or adult, storage lasts about 20-30 seconds. Older children and adults use mental strategies to aid their memory performance. For instance, simple rote rehearsal may be used to commit information to memory. Young children often do not rehearse unless reminded to do so, and when they do rehearse, they often fail to use clustering rehearsal. In **clustering rehearsal,** the person rehearses previous material while adding in additional information. If a list of words is read out loud to you, you are likely to rehearse each word as you hear it along with any previous words you were given. Young children will repeat each word they hear, but often fail to repeat the prior words in the list. In Schneider, Kron-Sperl, and Hunnerkopf's (2009) longitudinal study of 102 kindergarten children, the majority of children used no strategy to remember information, a finding that was consistent with previous research. As a result, their memory performance was reduced when compared to their abilities as they aged and started to use more effective memory strategies.

Executive Functions

Changes in attention and the working memory system also involve changes in executive function. **Executive function (ef)** refers to self-regulatory processes, such as the ability to inhibit behavior or cognitive flexibility, that enable adaptive responses to new situations or to reach a specific goal. Executive function skills gradually emerge during early childhood and continue to develop throughout childhood and adolescence. Like many cognitive changes, brain maturation, especially the prefrontal cortex, along with experience, influence the development of executive function skills. A child, whose parents are more warm and responsive, use scaffolding when the child is trying to solve a problem, and who provide cognitively stimulating environments for the child show higher executive function skills (Fay-Stammbach, Hawes & Meredith, 2014). For instance, scaffolding was positively correlated with greater cognitive flexibility at age two and inhibitory control at age four (Bibok, Carpendale & Müller, 2009).

STM and Learning

Individuals differ in their memory abilities, and these differences predict academic performance (Prebler, Krajewski, & Hasselhorn, 2013). Children with learning disabilities in math and reading often have difficulties with working memory (Alloway, 2009). They may struggle with following the directions of an assignment. When a task calls for multiple steps, children with poor working memory may miss steps because they may lose track of where they are in the task. Adults working with such children may need to communicate: using more familiar vocabulary, using shorter sentences, repeating task instructions more frequently, and breaking more complex tasks into smaller, more manageable steps. Some studies have also shown that more intensive training of working memory strategies, such as chunking, aid in improving the capacity of working memory in children with poor working memory (Alloway, Bibile, & Lau, 2013).

Long-term Memory

Long-term memory (LTM) is the continuous storage of information. Unlike short-term memory, the storage capacity of LTM has no real limits. It encompasses all the things you can remember what happened more than just a few minutes ago to all of the things that you can remember what happened days, weeks, and years ago. In keeping with the computer analogy, the information in your LTM would be like the information you have saved on the hard drive. It is not there on your desktop (your short-term memory), but you can pull up this information when you want it, at least most of the time. Not all long-term memories are strong memories. Some memories can only be recalled through prompts. For example, you might easily recall a fact— "What is the capital of the United States?"—or a procedure—"How do you ride a bike?"—but you might struggle to recall the name of the restaurant you had dinner when you were on vacation in France last summer. A prompt, such as that the restaurant was named after its owner, who spoke to you about your shared interest in soccer, may help you recall the name of the restaurant.

Long-term memory is divided into two types: explicit and implicit (Figure 3.8.5). Understanding the different types is important because a person's age or particular types of brain trauma or disorders can leave certain types of LTM intact while having

disastrous consequences for other types. **Explicit memories,** also called **declarative memories,** are those we consciously try to remember and recall. For example, if you are studying for your chemistry exam, the material you are learning will be part of your explicit memory. (Note: Sometimes, but not always, the terms explicit memory and declarative memory are used interchangeably.)

Implicit memories, also called **non-declarative memories,** are memories that are not part of our consciousness. They are memories formed from behaviors. Implicit memory is also called non-declarative memory.

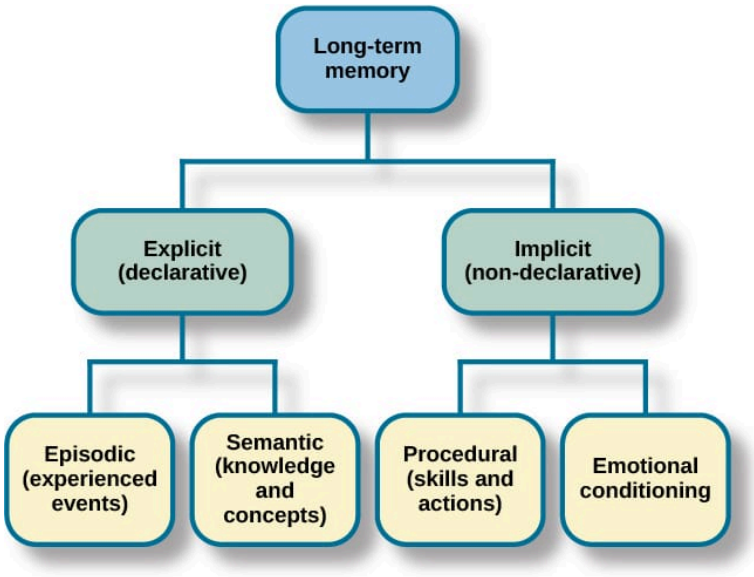


Figure 3.8.5. There are two components of long-term memory: explicit and implicit. Explicit memory includes episodic and semantic memory. Implicit memory includes procedural memory and things learned through conditioning.

Procedural memory is a type of implicit memory: it stores information about how to do things. It is the memory for skilled actions, such as how to brush your teeth, how to drive a car, how to swim the crawl (freestyle) stroke. If you are learning how to swim freestyle, you practice the stroke: how to move your arms, how to turn your head to alternate breathing from side to side, and how to kick your legs. You would practice this many times until you become good at it. Once you learn how to swim freestyle and your body knows how to move through the water, you will never forget how to swim freestyle, even if you do not swim for a couple of decades. Similarly, if you present an accomplished guitarist with a guitar, even if he has not played in a long time, he will still be able to play quite well.

Explicit or declarative memory has to do with the storage of facts and events we personally experienced. Explicit (declarative) memory has two parts: semantic memory and episodic memory. Semantic means having to do with language and knowledge about language. An example would be the question, “what does *argumentative* mean?” Stored in our **semantic memory** is knowledge about words, concepts, and language-based knowledge and facts. For example, answers to the following questions are stored in your semantic memory:

- Who was the first President of the United States?
- What is democracy?
- What is the longest river in the world?

Episodic memory is information about events we have personally experienced. The concept of episodic memory was first proposed about 40 years ago (Tulving, 1972). Since then, Tulving and others have looked at the scientific evidence and reformulated the theory. Currently, scientists believe that episodic memory is memory about happenings in particular places at particular times, the what, where, and when of an event (Tulving, 2002). It involves recollection of visual imagery as well as the feeling of familiarity (Hassabis & Maguire, 2007).

A component of episodic memory is **autobiographical memory,** or our personal narrative. Adolescents and adults rarely remember events from the first few years of life. We refer to this normal experience as infantile amnesia. In other words, we lack autobiographical memories from our experiences as an infant, toddler, and very young preschooler. Several factors contribute to the emergence of autobiographical memory, including brain maturation, improvements in language, opportunities to talk about experiences with parents and others, the development of theory of mind, and a representation of “self” (Nelson & Fivush, 2004).

Two-year-olds do remember fragments of personal experiences, but these are rarely coherent accounts of past events (Nelson & Ross, 1980). Between 2 and 2 ½ years of age, children can provide more information about past experiences. However, these recollections require considerable prodding by adults (Nelson & Fivush, 2004). Over the next few years, children will form more detailed autobiographical memories and engage in more reflection of the past.

Retrieval

So you have worked hard to encode (via effortful processing) and store some important information for your upcoming final exam. How do you get that information back out of storage when you need it? The act of getting information out of memory storage and back into conscious awareness is known as **retrieval**. This process would be similar to finding and opening a paper you had previously saved on your computer's hard drive. Now it is back on your desktop, and you can work with it again. Our ability to retrieve information from long-term memory is vital to our everyday functioning. You must be able to retrieve information from memory in order to do everything from knowing how to brush your hair and teeth, to driving to work, to knowing how to perform your job once you get there.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.8.6. Retrieval Cues discusses how cues prompt memory retrieval.

There are three ways to retrieve information from long-term memory storage systems: recall, recognition, and relearning. **Recall** is what we most often think about when we talk about memory retrieval: it means you can access information without cues. For example, you would use recall for an essay test. **Recognition** happens when you identify information that you have previously learned after re-encountering it. It involves a process of comparison. When you take a multiple-choice test, you are relying on recognition to help you choose the correct answer. Here is another example. Let us say you graduated from high school ten years ago, and you have returned to your hometown for your 10-year reunion. You may not be able to recall all of your classmates, but you recognize many of them based on their yearbook photos.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 3.8.7. Free Recall, Cued Recall, and Recognition discusses the various ways in which information can be retrieved from long term memory.

The third form of retrieval is **relearning**, and it is just as it sounds. It involves learning information that you previously learned. Whitney took Spanish in high school, but after high school, she did not have the opportunity to speak Spanish. Whitney is now 31, and her company has offered her an opportunity to work in their Mexico City office. In order to prepare herself, she enrolls in a Spanish course at the local community center. She is surprised at how quickly she can pick up the language after not speaking it for 13 years; this is an example of relearning.

Organization of Thinking

During middle childhood and adolescence, young people can learn and remember more due to improvements in the way they attend to and store information. As people learn more about the world, they develop more categories for concepts and learn more efficient strategies for storing and retrieving information. One significant reason is that they continue to have more experiences on which to tie new information. In other words, their **knowledge base**, *knowledge in particular areas that makes learning new information easier*, expands (Berger, 2014).

Cognitive Control

As noted earlier, executive functions, such as attention, increases in working memory, and cognitive flexibility, have been steadily improving since early childhood. Studies have found that executive function is very competent in adolescence. However, **self-regulation**, or *the ability to control impulses,* may still fail. A failure in self-regulation is especially true when there is high stress or high demand on mental functions (Luciano & Collins, 2012). While high stress or demand may tax even an adult's self-regulatory abilities, neurological changes in the adolescent brain may make teens particularly prone to more risky decision-making under these conditions.

Inductive and Deductive Reasoning

Inductive reasoning emerges in childhood and is a type of reasoning that is sometimes characterized as "bottom-up-processing" in which specific observations, or specific comments from those in authority, may be used to draw general conclusions. However, in inductive reasoning, the veracity of the information that created the general conclusion does not guarantee the accuracy of that conclusion. For instance, a child who has only observed thunder on summer days may conclude that it only thunders in the summer. In contrast, **deductive reasoning**, sometimes called "top-down-processing," emerges in adolescence. This type of reasoning starts with some overarching principle and, based on this, propose specific conclusions. Deductive reasoning guarantees an accurate conclusion if the premises on which it is based are accurate.

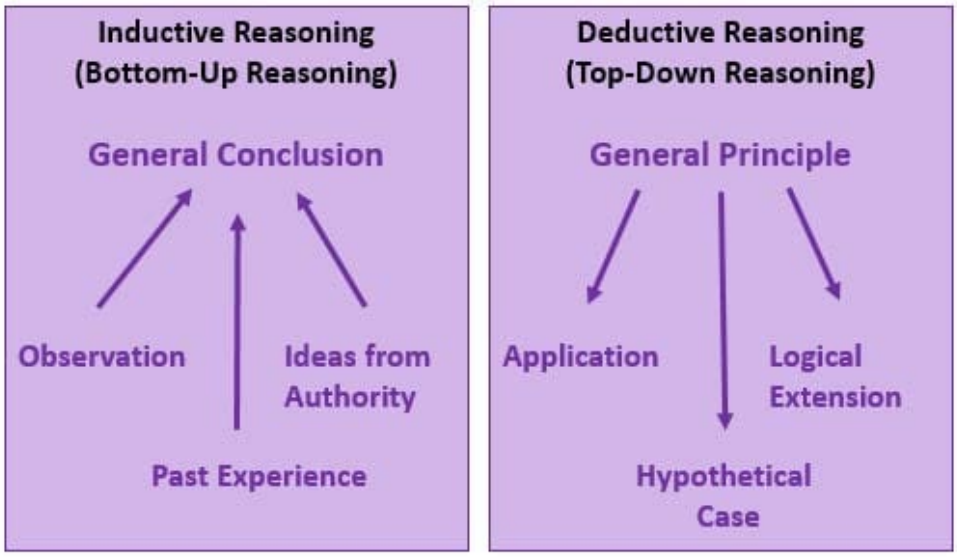


Figure 3.8.6. Models of inductive and deductive reasoning.

Intuitive versus Analytic Thinking

Cognitive psychologists often refer to intuitive and analytic thought as the Dual-Process Model, the notion that humans have two distinct networks for processing information (Albert & Steinberg, 2011). **Intuitive thought** is automatic, unconscious, and fast (Kahneman, 2011), and it is more experiential and emotional. In contrast, **Analytic thought** is deliberate, conscious, and rational. While these systems interact, they are distinct (Kuhn, 2013). Intuitive thought is easier and more commonly used in everyday life. It is also more commonly used by children and teens than by adults (Klaczynski, 2001). The quickness of adolescent thought,

along with the maturation of the limbic system, may make teens more prone to emotional, intuitive thinking than adults.

Critical Thinking

According to Bruning et al. (2004), there is a debate in U.S. education as to whether schools should teach students what to think or how to think. **Critical thinking**, or a detailed examination of beliefs, courses of action, and evidence, involves teaching children how to think. The purpose of critical thinking is to evaluate information in ways that help us make informed decisions. Critical thinking involves better understanding a problem through gathering, evaluating, and selecting information, and also by considering many possible solutions. Ennis (1987) identified several skills useful in critical thinking. These include: Analyzing arguments, clarifying information, judging the credibility of a source, making value judgments, and deciding on an action. Metacognition is essential to critical thinking because it allows us to reflect on the information as we make decisions.

Metacognition

As children mature through middle and late childhood and into adolescence, they have a better understanding of how well they are performing a task and the level of difficulty of a task. As they become more realistic about their abilities, they can adapt studying strategies to meet those needs. Young children spend as much time on an unimportant aspect of a problem as they do on the main point, while older children start to learn to prioritize and gauge what is significant and what is not. As a result, they develop metacognition. **Metacognition** refers to the knowledge we have about our thinking and our ability to use this awareness to regulate our cognitive processes (Bruning, Schraw, Norby, & Ronning, 2004).

Bjorklund (2005) describes a developmental progression in the acquisition and use of memory strategies. Such strategies are often lacking in younger children but increase in frequency as children progress through elementary school. Examples of memory strategies include rehearsing information you wish to recall, visualizing and organizing information, creating rhymes, such as “i” before “e” except after “c,” or inventing acronyms, such as “ROYGBIV” to remember the colors of the rainbow. Schneider, Kron-Sperl, and hünnerkopf (2009) reported a steady increase in the use of memory strategies from ages six to ten in their longitudinal study (see table 3.8.1). Moreover, by age ten, many children were using two or more memory strategies to help them recall information. Schneider and colleagues found that there were considerable individual differences at each age in the use of strategies and that children who utilized more strategies had better memory performance than their same-aged peers.

Table 3.8.1. Percentage of children who did not use any memory strategies by age.

Age	Percentage
6	55
7	44
8	25
9	17
10	13

A person may experience three deficiencies in their use of memory strategies. A **mediation deficiency** occurs when a person does not grasp the strategy being taught, and thus, does not benefit from its use. If you do not understand why using an acronym might be helpful, or how to create an acronym, the strategy is not likely to help you. In a **production deficiency,** the person does not spontaneously use a memory strategy and has to be prompted to do so. In this case, the person knows the strategy and is more than capable of using it, but they fail to “produce” the strategy on their own. For example, a child might know how to make a list but may fail to do this to help them remember what to bring on a family vacation. A **utilization deficiency** refers to a person using an appropriate strategy, but it fails to aid their performance. Utilization deficiency is common in the early stages of learning a new memory strategy (Schneider & Pressley, 1997; miller, 2000). Until the use of the strategy becomes automatic, it may slow down the learning process, as space is taken up in memory by the strategy itself. Initially, children may get frustrated because their memory performance may seem worse when they try to use the new strategy. Once children become more adept at using the strategy, their memory performance will improve. Sodian and Schneider (1999) found that new memory strategies acquired before age 8 often show utilization deficiencies, with there being a gradual improvement in the child’s use of the strategy. In contrast, strategies acquired after this age often followed an “all-or-nothing” principle in which improvement was not gradual, but abrupt.

Candela Citations

CC licensed content, Original

- Information Processing Theories. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...g-theories/%20. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Psychology. **Authored by**: Rose M. Spielman, William J. Jenkins, Marilyn D. Lovett. **Provided by**: OpenStax. **Retrieved from**: https://openstax.org/details/books/psychology. **License**: CC BY: Attribution
- Attention. **Provided by**: Wikipedia. **Retrieved from**: https://en.wikipedia.org/wiki/Attention. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- Lifespan Development. **Authored by**: Martha Lally and Suzanne Valentine-French. **Retrieved from**: http://dept.clcillinois.edu/psy/Life...evelopment.pdf. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- Divided Attention, Selective Attention, Inattentional Blindness, & Change Blindness. **Authored by**: Carole Yue. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/s4JBqLoY3tY. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- Theories of Selective Attention. **Authored by**: Carole Yue. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/qpsaHE_uZic. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- The Spotlight Model of Attention and Our Ability to Multitask. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/THJgaznSBu8. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- Information Processing Model: Sensory, Working, and Long Term Memory. **Authored by**: Carole Yue. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/pMMRE4Q2FGk. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Specific attribution

- Free Recall, Cued Recall, and Recognition. **Authored by**: Carole Yue. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/Uhyk2bRTguI. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

This page titled 6.4: Information Processing Theories is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

6.5: Intelligence

For nearly a century, educators and psychologists have debated the nature of intelligence, and more specifically whether intelligence is just one broad ability or can take more than one form. Many classical definitions of the concept have tended to define **intelligence** as a single broad ability that allows a person to solve or complete many sorts of tasks, or at least many academic tasks like reading, knowledge of vocabulary, and the solving of logical problems (Garlick, 2002). Other psychologists believe that instead of a single factor, intelligence is a collection of distinct abilities. Still, other psychologists believe that intelligence should be defined in more practical terms. We'll review three perspectives on intelligence, Spearman's g, Sternberg's Triarchic Theory of Intelligence, and Gardner's Frame of Mind. Understanding theories of intelligence will help us understand variations in students' intellectual abilities.

British psychologist Charles Spearman believed intelligence consisted of one general factor, called *g*, which could be measured and compared among individuals. Spearman focused on the commonalities among various intellectual abilities and deemphasized what made each unique. There is research evidence of such a global ability, and the idea of general intelligence often fits with society's everyday beliefs about intelligence. Partly for these reasons, an entire mini-industry has grown up around publishing tests of intelligence, academic ability, and academic achievement. Since these tests affect the work of teachers, I return to discussing them later in this book.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 6.6.1. Intelligence explains the different definitions of intelligence and the nature/nurture debate in the context of intelligence.

Measuring Intelligence: Standardization and the Intelligence Quotient

The goal of most intelligence tests is to measure "*g*," the general intelligence factor. Good intelligence tests are **reliable,** meaning that they are consistent over time, and also demonstrate **validity,** meaning that they actually measure intelligence rather than something else. Because intelligence is such an important individual difference dimension, psychologists have invested substantial effort in creating and improving measures of intelligence, and these tests are now considered the most accurate of all psychological tests. In fact, the ability to accurately assess intelligence is one of the most important contributions of psychology to everyday public life.

Intelligence changes with age. A 3-year-old who could accurately multiply 183 by 39 would certainly be intelligent, but a 25-year-old who could not do so would be seen as unintelligent. Thus understanding intelligence requires that we know the norms or standards in a given population of people at a given age. The **standardization** of a test involves giving it to a large number of people at different ages and computing the average score on the test at each age level.

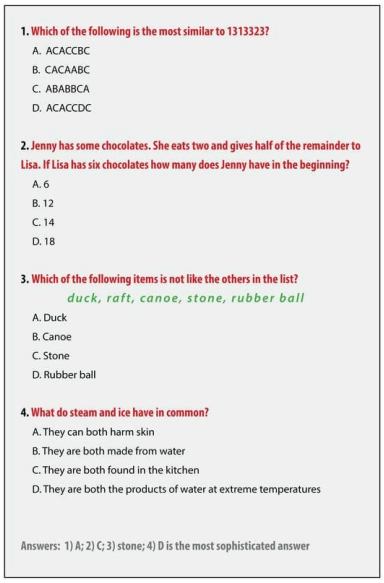
It is important that intelligence tests be standardized on a regular basis, because the overall level of intelligence in a population may change over time. The **Flynn effect** refers to the observation that scores on intelligence tests worldwide have increased substantially over the past decades (Flynn, 1999). Although the increase varies somewhat from country to country, the average increase is about 3 IQ points every ten years. There are many explanations for the Flynn effect, including better nutrition, increased access to information, and more familiarity with multiple-choice tests (Neisser, 1998). But whether people are actually getting smarter is debatable (Neisser, 1997).

Once the standardization has been accomplished, we have a picture of the average abilities of people at different ages and can calculate a person's **mental age**, which is the age at which a person is performing intellectually. If we compare the mental age

of a person to the person's chronological age, the result is the **intelligence quotient (IQ),** a measure of intelligence that is adjusted for age. A simple way to calculate IQ is by using the following formula:

$$IQ = \text{mental age} \div \text{chronological age} \times 100.$$

Thus a 10-year-old child who does as well as the average 10-year-old child has an IQ of 100 (10 ÷ 10 × 100), whereas an 8-year-old child who does as well as the average 10-year-old child would have an IQ of 125 (10 ÷ 8 × 100). Most modern intelligence tests are based on the relative position of a person's score among people of the same age, rather than on the basis of this formula, but the idea of an intelligence "ratio" or "quotient" provides a good description of the score's meaning.



1. Which of the following is the most similar to 1313323?
   A. ACACCBC
   B. CACAABC
   C. ABABBCA
   D. ACACCDC

2. Jenny has some chocolates. She eats two and gives half of the remainder to Lisa. If Lisa has six chocolates how many does Jenny have in the beginning?
   A. 6
   B. 12
   C. 14
   D. 18

3. Which of the following items is not like the others in the list?
   duck, raft, canoe, stone, rubber ball
   A. Duck
   B. Canoe
   C. Stone
   D. Rubber ball

4. What do steam and ice have in common?
   A. They can both harm skin
   B. They are both made from water
   C. They are both found in the kitchen
   D. They are both the products of water at extreme temperatures

Answers: 1) A; 2) C; 3) stone; 4) D is the most sophisticated answer

Figure 6.6.1. Examples of the types of items you might see on an intelligence test.

https://assessments.lumenlearning.co...essments/16599

Wechsler Scales

The **Wechsler Adult Intelligence Scale (WAIS)** is the most widely used intelligence test for adults (Watkins, Campbell, Nieberding, & Hallmark, 1995). The current version of the WAIS, the WAIS-IV, was standardized on 2,200 people ranging from 16 to 90 years of age. It consists of 15 different tasks, each designed to assess intelligence, including working memory, arithmetic ability, spatial ability, and general knowledge about the world. The WAIS-IV yields scores on four domains: verbal, perceptual, working memory, and processing speed. The reliability of the test is high (more than 0.95), and it shows substantial construct validity. The WAIS-IV is correlated highly with other IQ tests such as the Stanford-Binet, as well as with criteria of academic and life success, including college grades, measures of work performance, and occupational level. It also shows significant correlations with measures of everyday functioning among people with intellectual disabilities.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 6.1.2. Brain vs. Bias provides an overview of the WAIS & WISC tests, standardization and validity, and IQ performance.

The Wechsler scale has also been adapted for preschool children in the form of the *Wechsler primary and preschool scale of*

intelligence-fourth edition (WPPSI-IV) and for older children and adolescents in the form of the *Wechsler intelligence scale for children-fifth edition (WISC-V)*.

Bias in Intelligence Testing

Intelligence tests and psychological definitions of intelligence have been heavily criticized since the 1970s for being biased in favor of Anglo-American, middle-class respondents and for being inadequate tools for measuring non-academic types of intelligence or talent. Intelligence changes with experience, and intelligence quotients or scores do not reflect that ability to change. What is considered smart varies culturally as well, and most intelligence tests do not take this variation into account. For example, in the West, being smart is associated with being quick. A person who answers a question the fastest is seen as the smartest, but in some cultures, being smart is associated with considering an idea thoroughly before giving an answer. A well-thought out, contemplative answer is the best answer.

watch it

Video 6.1.3. Watch this video to learn more about the history behind intelligence testing.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Theories of Intelligence

Psychologists have long debated how to best conceptualize and measure intelligence (Sternberg, 2003). These questions include how many types of intelligence there are, the role of nature versus nurture in intelligence, how intelligence is represented in the brain, and the meaning of group differences in intelligence.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 6.6.4. Theories of Intelligence reviews a few of the different theoretical views of intelligence.

General Intelligence Factor ("*g*")

From 1904-1905 the French psychologist Alfred Binet (1857–1914) and his colleague Théodore Simon (1872–1961) began working on behalf of the French government to develop a measure that would identify children who would not be successful with the regular school curriculum. The goal was to help teachers better educate these students (Aiken, 1994). Binet and Simon developed what most psychologists today regard as the first intelligence test, which consisted of a wide variety of questions that included the ability to name objects, define words, draw pictures, complete sentences, compare items, and construct sentences.

Binet and Simon (Binet, Simon, & Town, 1915; Siegler, 1992) believed that the questions they asked the children all assessed the basic abilities to understand, reason, and make judgments. It turned out that the correlations among these different types of

measures were, in fact, all positive; that is, students who got one item correct were more likely to also get other items correct, even though the questions themselves were very different.

On the basis of these results, the psychologist Charles Spearman (1863–1945) hypothesized that there must be a single underlying construct that all of these items measure. He called the construct that the different abilities and skills measured on intelligence tests have in common the **general intelligence factor (*g*).** Virtually all psychologists now believe that there is a generalized intelligence factor, "g," that relates to abstract thinking and that includes the abilities to acquire knowledge, to reason abstractly, to adapt to novel situations, and to benefit from instruction and experience (Gottfredson, 1997; Sternberg, 2003). People with higher general intelligence learn faster.

Soon after Binet and Simon introduced their test, the American psychologist Lewis Terman at Stanford University (1877–1956) developed an American version of Binet's test that became known as the *Stanford- Binet intelligence test*. The Stanford-Binet is a measure of general intelligence made up of a wide variety of tasks, including vocabulary, memory for pictures, naming of familiar objects, repeating sentences, and following commands.

Sternberg's Triarchic theory

Although there is general agreement among psychologists that "g" exists, there is also evidence for **specific intelligence** "s," *a measure of specific skills in narrow domains*. One empirical result in support of the idea of "s" comes from intelligence tests themselves. Although the different types of questions do correlate with each other, some items correlate more highly with each other than do other items; they form clusters or clumps of intelligences.

One advocate of the idea of multiple intelligences is the psychologist Robert Sternberg. Sternberg has proposed a **Triarchic (three-part) Theory of Intelligence** that proposes that *people may display more or less analytical intelligence, creative intelligence, and practical intelligence*. Sternberg (1985, 2003) argued that traditional intelligence tests assess **analytical intelligence**, *academic problem solving and performing calculations,* but that they do not typically assess **creative intelligence**, *the ability to adapt to new situations and create new ideas*, and/or **practical intelligence**, *the ability to demonstrate common sense and street- smarts.*

As Sternberg proposed, research has found that creativity is not highly correlated with analytical intelligence (Furnham & Bakhtiar, 2008), and exceptionally creative scientists, artists, mathematicians, and engineers do not score higher on intelligence than do their less creative peers (Simonton, 2000). Furthermore, the brain areas that are associated with **convergent thinking**, *thinking that is directed toward finding the correct answer to a given problem*, are different from those associated with **divergent thinking**, *the ability to generate many different ideas or solutions to a single problem* (Tarasova, Volf, & Razoumnikova, 2010). On the other hand, being creative often takes some of the basic abilities measured by "g," including the abilities to learn from experience, to remember information, and to think abstractly (bink & marsh, 2000). Ericsson (1998), Weisberg (2006), Hennessey and Amabile (2010), and Simonton (1992) studied creative people and identified at least five components that are likely to be important for creativity as listed in the table below.

Table 6.6.1. Important components for creativity

Component	Description
Expertise	Creative people have studied and learned about a topic
Imaginative Thinking	Creative people view problems in new and different ways
Risk-Taking	Creative people take on new, but potentially risky approaches
Intrinsic Interest	Creative people take on projects for interest, not money
Working in Creative Environments	The most creative people are supported, aided, and challenged by other people working on similar projects

The last aspect of the triarchic model, practical intelligence, refers primarily to intelligence that cannot be gained from books or formal learning. Practical intelligence represents a type of "street smarts" or "common sense" that is learned from life experiences. Although a number of tests have been devised to measure practical intelligence (Sternberg, Wagner, & Okazaki, 1993; Wagner & Sternberg, 1985), research has not found much evidence that practical intelligence is distinct from "g" or that it is predictive of success at any particular tasks (Gottfredson, 2003). Practical intelligence may include, at least in part, certain abilities that help people perform well at specific jobs, and these abilities may not always be highly correlated with general intelligence (Sternberg et al., 1993).

Gardner's Frame of Mind

Theory of multiple intelligences: another champion of the idea of specific types of intelligences rather than one overall intelligence is the psychologist Howard Gardner (1983, 1999). Gardner argued that it would be evolutionarily functional for different people to have different talents and skills, and proposed that there are eight intelligences that can be differentiated from each other. A potential ninth intelligence, existential intelligence, still needs empirical support. Gardner investigated intelligences by focusing on children who were talented in one or more areas and adults who suffered from strokes that compromised some capacities, but not others. Gardner also noted that some evidence for multiple intelligences comes from the abilities of **autistic savants**, *people who score low on intelligence tests overall but who nevertheless may have exceptional skills in a given domain*, such as math, music, art, or in being able to recite statistics in a given sport (Treffert & Wallace, 2004). In addition to brain damage and the existence of savants, Gardner identified these 8 intelligences based on other criteria, including a set developmental history and psychometric findings. See table 5.4 for a list of Gardner's eight specific intelligences.

Table 6.6.2. Howard Gardner's eight specific intelligences

Intelligence	Description
Linguistic	The ability to speak and write well
Logical-mathematical	The ability to use logic and mathematical skills to solve problems
Spatial	The ability to think and reason about objects in three dimensions
Musical	The ability to perform and enjoy music
Kinesthetic (body)	The ability to move the body in sports, dance, or other physical activities
Interpersonal	The ability to understand and interact effectively with others
Intrapersonal	The ability to have insight into the self
Naturalistic	The ability to recognize, identify, and understand animals, plants, and other living things

Source: Adapted from Gardner, H. (1999). Intelligence Framed: Multiple Intelligences for the 21st Century. New York, NY: Basic Books.

The idea of multiple intelligences has been influential in the field of education, and teachers have used these ideas to try to teach differently to different students. For instance, to teach math problems to students who have particularly good kinesthetic intelligence, a teacher might encourage the students to move their bodies or hands according to the numbers. On the other hand, some have argued that these "intelligences" sometimes seem more like "abilities" or "talents" rather than real intelligence. There is no clear conclusion about how many intelligences there are. Our sense of humor, artistic skills, dramatic skills, and so forth also separate intelligences? Furthermore, and again demonstrating the underlying power of a single intelligence, the many different intelligences are, in fact, correlated and thus represent, in part, "g" (Brody, 2003).

https://lumenlearning.h5p.com/content/1290777754718118168/embed

Extremes of Intelligence: Intellectual Disability and Giftedness

The results of studies assessing the measurement of intelligence show that IQ is distributed in the population in the form of a **Normal Distribution (or bell curve),** which *is the pattern of scores usually observed in a variable that clusters around its average*. In a normal distribution, the bulk of the scores fall toward the middle, with many fewer scores falling at the extremes. The normal distribution of intelligence shows that on IQ tests, as well as on most other measures, the majority of people cluster around the average (in this case, where IQ = 100), and fewer are either very smart or very dull (see Figure 5.10). Because the standard deviation of an IQ test is about 15, this means that about 2% of people score above an IQ of 130, often considered the threshold for giftedness, and about the same percentage score below an IQ of 70, often being considered the threshold for intellectual disability.

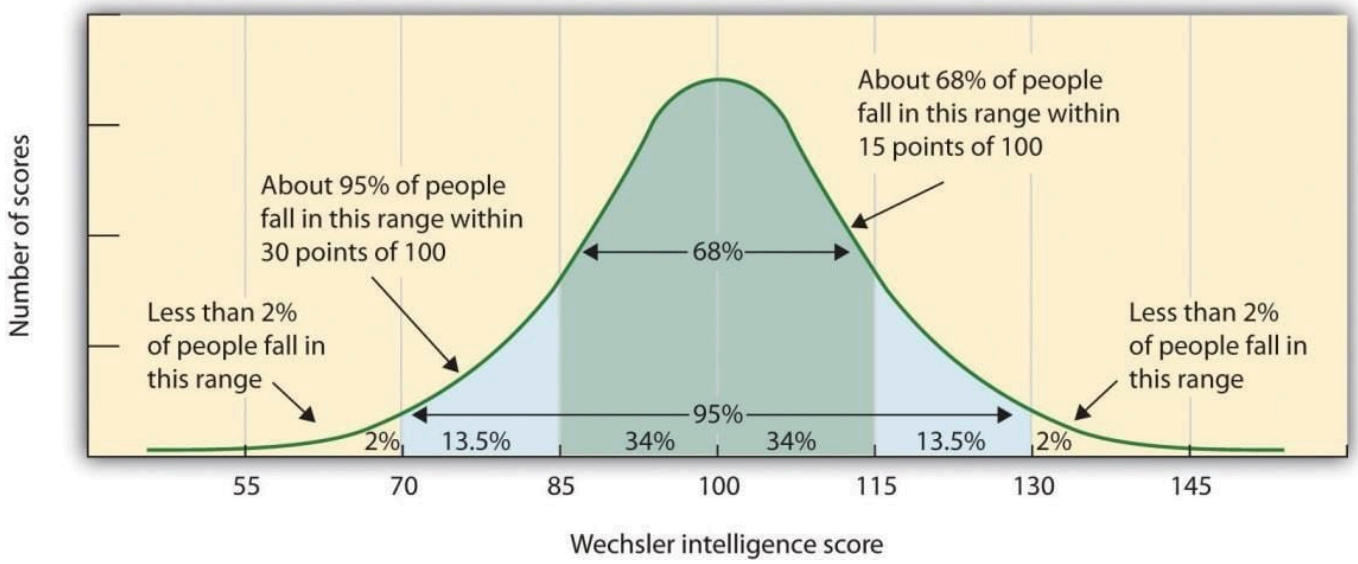


Figure 6.6.2. Distribution of IQ Scores in the General PopulationThe normal distribution of IQ scores in the general population shows that most people have about average intelligence, while very few have extremely high or extremely low intelligence.

People with very low IQ define one end of the distribution of intelligence scores. **Intellectual disability** (or **intellectual developmental disorder**) is assessed based on cognitive capacity (IQ) and adaptive functioning. The severity of the disability is based on adaptive functioning, or how well the person handles everyday life tasks. About 1% of the United States population, most of them males, fulfill the criteria for intellectual developmental disorder, but some children who are given this diagnosis lose the classification as they get older and better learn to function in society. A particular vulnerability of people with low IQ is that they may be taken advantage of by others, and this is an important aspect of the definition of intellectual developmental disorder (Greenspan, Loughlin, & Black, 2001).

Giftedness *refers to those who have an IQ of 130 or higher* (Lally & Valentine-French, 2015). Having an extremely high IQ is clearly less of a problem than having an extremely low IQ, but there may also be challenges to being particularly smart. It is often assumed that schoolchildren who are labeled as "gifted" may have adjustment problems that make it more difficult for them to create social relationships. To study gifted children, Lewis Terman and his colleagues (Terman & Oden, 1959) selected about 1,500 high school students who scored in the top 1% on the Stanford-Binet and similar IQ tests (i.e., who had IQs of about 135 or higher), and tracked them for more than seven decades (the children became known as the "termites" and are still being studied today). This study found that these students were not unhealthy or poorly adjusted, but rather were above average in physical health and were taller and heavier than individuals in the general population. The students also had above-average social relationships and were less likely to divorce than the average person (Seagoe, 1975).

Terman's study also found that many of these students went on to achieve high levels of education and entered prestigious professions, including medicine, law, and science. Of the sample, 7% earned doctoral degrees, 4% earned medical degrees, and 6% earned law degrees. These numbers are all considerably higher than what would have been expected from a more general population. Another study of young adolescents who had even higher IQs found that these students ended up attending graduate school at a rate more than 50 times higher than that in the general population (Lubinski & Benbow, 2006).

As you might expect based on our discussion of intelligence, kids who are gifted have higher scores on general intelligence "g," but there are also different types of giftedness. Some children are particularly good at math or science, some at automobile repair or carpentry, some at music or art, some at sports or leadership, and so on. There is a lively debate among scholars about whether it is appropriate or beneficial to label some children as "gifted and talented" in school and to provide them with accelerated special classes and other programs that are not available to everyone. Although doing so may help the gifted kids (Colangelo & Assouline, 2009), it also may isolate them from their peers and make such provisions unavailable to those who are not classified as "gifted."

Candela Citations

CC licensed content, Original

- Intelligence. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad.../intelligence/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Specific attribution

- Intelligence. **Authored by**: Carole Yue. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/F9n3hLnwwc0. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- Theories of Intelligence. **Authored by**: Brooke Miller. **Provided by**: Khan Academy . **Retrieved from**: https://youtu.be/oaJ01Ex7DLw. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

This page titled 6.5: Intelligence is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

adolescent egocentrism: a characteristic of adolescent thinking that leads young people (ages 10-13) to focus on themselves to the exclusion of others (according to David Elkind)

analytic thought: thought that results from analysis, such as a systematic ranking of pros and cons, risks and consequences, possibilities, and facts. Analytic thought depends on logic and rationality

behavioral decision-making theory: proposes that adolescents and adults both weigh the potential rewards and consequences of an action. However, research has shown that adolescents seem to give more weight to rewards, particularly social rewards than do adults

constructivist perspective: based on the work of Piaget, a quantitative, stage-theory approach. This view hypothesizes that adolescents' cognitive improvement is relatively sudden and drastic, as adolescents learn by acting on their environment and they actively construct knowledge

deductive reasoning: reasoning from a general statement, premise, or principle, though logical steps to figure out (deduce) specifics. Also called top-down processing

divided attention: the ability to pay attention to two or more stimuli at the same time; this ability improves during adolescence

dual process model/dual processing: the notion that two networks exist within the human brain, one for emotional processing of stimuli and one for analytic reasoning

formal operational thought: the fourth and final stage of Piaget's theory of cognitive development, characterized by more systematic logical thinking and by the ability to understand and systematically manipulate abstract concepts

hypothetical thought: reasoning that includes propositions and possibilities that may not reflect reality

imaginary audience: the other people who, in an adolescent's egocentric belief, are watching and taking note of his or her appearance, ideas, and behavior. This belief makes many adolescents very self-conscious

information-processing perspective: derives from the study of artificial intelligence and explains cognitive development in terms of the growth of specific components of the overall process of thinking

intuitive thought: thoughts that arise from an emotion or a hunch, beyond rational explanation, and is influenced by past experiences and cultural assumptions

invincibility fable: an adolescent's egocentric conviction that he or she cannot be overcome or even harmed by anything that might defeat a normal mortal, such as unprotected sex, drug abuse, or high-speed driving

metacognition: refers to "thinking about thinking" and it is relevant in social cognition and results in increased introspection, self-consciousness, and intellectualization during adolescence

mnemonic devices: mental strategies to help learn and remember information more efficiently; improves during adolescence

personal fable: an aspect of adolescent egocentrism characterized by an adolescent's belief that his or her thoughts, feelings, and experiences are unique, more wonderful, or more awful than anyone else's

relativistic thinking: thinking that understands the relative, or situational, nature of circumstances

selective attention: the process by which one focuses on one stimulus while tuning out another; this ability improves during adolescence

---

This page titled 6.6: Glossary is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

7: LEARNING, ACHIEVEMENT, AND WORK IN ADOLESCENCE

Learning Objectives

- Identify the functions of education
- Explain the symptoms and impact of learning disabilities, autism spectrum disorder, and attention deficit hyperactivity disorder
- Identify factors that impact academic achievement
- Explain the functions of different levels of schooling
- Identify trends in teens working
- Explain career development according to Holland

Remember the ecological systems model that we explored early in the course? This model helps us understand an individual by examining the contexts in which the person lives and the direct and indirect influences on that person's development. School and work become an essential component of a teen's life. Parents, educators, and society contribute to teen's experiences in school and work, as indicated by the ecological systems model through their interaction.

7.1: Education

7.2: Understanding Learning Difficulties

7.3: Academic Achievement

7.4: Work and Career

7.5: Glossary

This page titled 7: Learning, Achievement, and Work in Adolescence is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

7.1: Education

Often, we use the terms “schooling” and “education” interchangeably, but they have different meanings. Education is not solely concerned with the basic academic concepts that a student learns in the classroom. Education is a social institution through which a society’s children are taught basic academic knowledge, learning skills, and cultural norms. Societies also educate their children outside of the school system in matters of everyday practical living. These two types of learning are referred to as formal education and informal education.

Formal education describes the learning of academic facts and concepts through a formal curriculum. Arising from the tutelage of ancient Greek thinkers, centuries of scholars have examined topics through formalized methods of learning. Education in earlier times was only available to the higher classes; they had the means for access to scholarly materials, plus the luxury of leisure time that could be used for learning. The Industrial Revolution and its accompanying social changes made education more accessible to the general population. Many families in the emerging middle class found new opportunities for schooling.

The modern U.S. educational system is the result of this progression. Today, basic education is considered a right and responsibility for all citizens. Expectations of this system focus on formal education, with curricula and testing designed to ensure that students learn the facts and concepts that society believes are basic knowledge.

In contrast, **informal education** describes learning about cultural values, norms, and expected behaviors by participating in society. This type of learning occurs both through the formal education system and at home. Our earliest learning experiences generally happen via parents, relatives, and others in our community. Through informal education, we learn how to dress for different occasions, how to perform regular life routines like shopping for and preparing food, and how to keep our bodies clean.

The Functions of Schools

Schools teach us far more than reading, writing, and arithmetic. They also socialize us to cultural norms and expectations of our society. These cultural expectations and norms are reinforced by our teachers, our textbooks, and our classmates. (For students outside the dominant culture, this aspect of the education system can pose significant challenges.) You might remember learning your multiplication tables in second grade and also learning the social rules of taking turns on the swings at recess. You might recall learning about the U.S. Constitution in an American Government course as well as learning when and how to speak up in class.

Schools are one of the more important social institutions in a society and contribute to two kinds of functions: manifest (or primary) functions, which are the intended and visible functions of education; and latent (or secondary) functions, which are the hidden and unintended functions.

Manifest Functions of Education

There are several major manifest functions associated with education. The first is socialization. Beginning in preschool and kindergarten, students are taught to practice various societal roles. The French sociologist Émile Durkheim (1858–1917), who established the academic discipline of sociology, characterized schools as “socialization agencies that teach children how to get along with others and prepare them for adult economic roles” (Durkheim 1898). Indeed, it seems that schools have taken on this responsibility in full.

This socialization also involves learning the rules and norms of society as a whole. In the early days of compulsory education, students learned the dominant culture. Today, since the culture of the United States is increasingly diverse, students may learn a variety of cultural norms, not only that of the dominant culture.

School systems in the United States also transmit the core values of the nation through manifest functions like social control. One of the roles of schools is to teach students conformity to law and respect for authority. Obviously, such respect, given to teachers and administrators, will help a student navigate the school environment. This function also prepares students to enter the workplace and the world at large, where they will continue to be subject to people who have authority over them. The fulfillment of this function rests primarily with classroom teachers and instructors who are with students all day.

Education also provides one of the major methods used by people for upward social mobility. This function is referred to as **social**

placement. College and graduate schools are viewed as vehicles for moving students closer to the careers that will give them the financial freedom and security they seek. As a result, college students are often more motivated to study areas that they believe will be advantageous on the social ladder. A student might value business courses over a class in Victorian poetry because she sees business class as a stronger vehicle for financial success.

Latent Functions of Education

Education also fulfills latent functions. As you well know, much goes on in a school that has little to do with formal education. For example, you might notice an attractive fellow student when he gives a particularly interesting answer in class—catching up with him and making a date speaks to the latent function of courtship fulfilled by exposure to a peer group in the educational setting.

The educational setting introduces students to social networks that might last for years and can help people find jobs after their schooling is complete. Of course, with social media such as Facebook and LinkedIn, these networks are easier than ever to maintain. Another latent function is the ability to work with others in small groups, a skill that is transferable to a workplace, and that might not be learned in a homeschool setting.

The educational system, especially as experienced on university campuses, has traditionally provided a place for students to learn about various social issues. There is ample opportunity for social and political advocacy, as well as the ability to develop tolerance to the many views represented on campus. In 2011, the Occupy Wall Street movement swept across college campuses all over the United States, leading to demonstrations in which diverse groups of students were unified with the purpose of changing the political climate of the country.

Another role of schools, according to functionalist theory, is that of **sorting** or classifying students based on academic merit or potential. The most capable students are identified early in schools through testing and classroom achievements. Such students are placed in accelerated programs in anticipation of successful college attendance.

School, particularly in recent years, is taking over some of the functions that were traditionally undertaken by family. Society relies on schools to teach about human sexuality as well as basic skills such as budgeting and job applications—topics that at one time, were addressed by the family.

Table 7.2.1. Manifest and Latent Functions of Education

Manifest Functions: Openly stated functions with intended goals	Latent Functions: Hidden, unstated functions with sometimes unintended consequences
Socialization	Courtship
Transmission of culture	Social networks
Social control	Working in groups
Social placement	Creation of generation gap
Cultural innovation	Political and social integration

Student Diversity

Diversity means different things to different people, and it can be understood differently in different environments. In the context of education, diversity generally refers to the differences among people in the school environment by race, culture, ethnicity, religion, socioeconomic status, sexual orientation, abilities, opinions, political views, and in other ways. We also think about how groups interact with one another, given their differences (even if they're just perceived differences.) How do diverse populations experience and explore their relationships?

Students have, of course, always been diverse. Whether in the past or in the present day, students learn at unique paces, show unique personalities, and learn in their own ways. In recent decades, though, the forms and extent of diversity have increased. Now more than ever, teachers are likely to serve students from diverse language backgrounds, to serve more individuals with special educational needs, and to teach students either younger and older than in the past.

Cultural and Language Diversity

Take the case of language diversity. In the United States, about 40 million people, or 14% of the population are Hispanic. About 20% of these speak primarily Spanish, and approximately another 50% speak only limited English (United States Census Bureau, 2005). The educators responsible for the children in this group need to accommodate instruction to these students somehow. Part of the solution, of course, is to arrange specialized second-language teachers and classes. But adjustment must also happen in "regular" classrooms of various grade levels and subjects. Classroom teachers must learn to communicate with students whose English language background is limited, at the same time that the students themselves are learning to use English more fluently (Pitt, 2005). Since relatively few teachers are Hispanic or speak fluent Spanish, the adjustments can sometimes be a challenge. Teachers must plan lessons and tasks that students actually understand. At the same time, teachers must also keep track of the major learning goals of the curriculum.

- Cultures and ethnic groups differ not only in languages but also in how languages are used. Since some of the patterns differ from those typical of modern classrooms, they can create misunderstandings between teachers and students (Cazden, 2001; Rogers et al., 2005). Consider these examples:
- In some cultures, it is considered polite or even intelligent not to speak unless you have something truly important to say. Chitchat, or talk that simply affirms a personal tie between people, is considered immature or intrusive (Minami, 2002). In a classroom, this habit can make it easier for a child to learn not to interrupt others, but it can also make the child seem unfriendly.
- Eye contact varies by culture. In many African American and Latin American communities, it is considered appropriate and respectful for a child not to look directly at an adult who is speaking to them (Torres-Guzman, 1998). In classrooms, however, teachers often expect a lot of eye contact (as in "I want all eyes on me!") and may be tempted to construe a lack of eye contact as a sign of indifference or disrespect.
- Social distance varies by culture. In some cultures, it is common to stand relatively close when having a conversation; in others, it is more customary to stand relatively far apart (Beaulieu, 2004). Problems may happen when a teacher and student prefer different social distances. A student who expects a closer distance than does the teacher may seem overly familiar or intrusive, whereas one who expects a longer distance may seem overly formal or hesitant.
- Wait time varies by culture. Wait time is the gap between the end of one person's comment or question and the next person's reply or answer. In some cultures, wait time is relatively long, as long as three or four seconds (Tharp & Gallimore, 1989). In others, it is a negative gap, meaning that it is acceptable, even expected, for a person to interrupt before the end of the previous comment. In classrooms, the wait time is customarily about one second; after that, the teacher is likely to move on to another question or to another student. A student who habitually expects a wait time longer than one second may seem hesitant, and not be given many chances to speak. A student who expects a negative wait time, on the other hand, may seem overeager or even rude.
- In most non-Anglo cultures, questions are intended to gain information, and it is assumed that a person asking the question truly does not have the information requested (Rogoff, 2003). In most classrooms, however, teachers regularly ask test questions, which are questions to which the teacher already knows the answer, and that simply assess whether a student knows the answer as well (Macbeth, 2003). The question: "How much is 2 + 2?" for example, is a test question. If the student is not aware of this purpose, he or she may become confused, or think that the teacher is surprisingly ignorant. Worse yet, the student may feel that the teacher is trying deliberately to shame the student by revealing the student's ignorance or incompetence to others.
- Preference for activities that are cooperative rather than competitive. Many activities in school are competitive, even when teachers try to de-emphasize the competition. Once past the first year or second year of school, students often become attentive to who receives the highest marks on an assignment, for example, or who is the best athlete at various sports or whose contributions to class discussions gets the most verbal recognition from the teacher (Johnson & Johnson, 1998). A teacher deliberately organizes important activities or assignments competitively, as in "Let's see who finishes the math sheet first." Classroom life can then become explicitly competitive, and the competitive atmosphere can interfere with cultivating supportive relationships among students or between students and the teacher (Cohen, 2004). For students who give priority to these relationships, competition can seem confusing at best and threatening at worst. A student may wonder, "What sort of sharing or helping with answers is allowed?" The answer to this question may be different depending on the cultural background of the student and teacher. What the student views as cooperative sharing may be seen by the teacher as laziness, freeloading, or even cheating.

Diversity of Special Educational Needs

Another factor making classrooms increasingly diverse has been the inclusion of students with disabilities into classrooms with non-disabled peers. In the United States, the trend began in the 1970s, but accelerated with the passage of the Individuals

with Disabilities Education Act in 1975, and again when the Act was amended in 2004 (United States Government Printing Office, 2005). The law guarantees free, appropriate education for children with disabilities of any kind—whether the impairment is physical, cognitive, emotional, or behavioral. The laws also recognize that such students need special supports in order to learn or function effectively in a classroom with non-disabled peers, so they provide for special services (for example, teaching assistants) and procedures for making individualized educational plans for students with disabilities.

Children with Disabilities: Legislation

Since the 1970s, political and social attitudes have moved increasingly toward including people with disabilities into a wide variety of "regular" activities. In the United States, the shift is illustrated clearly in the Federal legislation that was enacted during this time. Three major laws were passed that guaranteed the rights of persons with disabilities, and of children and students with disabilities in particular. The third law has had the biggest impact on education.

Rehabilitation Act of 1973, Section 504: This law, the first of its kind, required that individuals with disabilities be accommodated in any program or activity that receives Federal funding (PL 93-112, 1973). Although this law was not intended specifically for education, in practice, it has protected students' rights in some extra-curricular activities (for older students) and in some child care or after-school care programs (for younger students). If those programs receive Federal funding of any kind, the programs are not allowed to exclude children or youths with disabilities, and they have to find reasonable ways to accommodate the individuals' disabilities.

Americans with Disabilities Act of 1990 (or ADA): This legislation also prohibited discrimination on the basis of disability, just as Section 504 of the Rehabilitation Act had done (PL 101-336, 1990). Although the ADA also applies to all people (not just to students), its provisions are more specific and "stronger" than those of Section 504. In particular, ADA extends to all employment and jobs, not just those receiving Federal funding. It also specifically requires accommodations to be made in public facilities such as with buses, restrooms, and telephones. ADA legislation is therefore responsible for some of the "minor" renovations in schools that you may have noticed in recent years, like wheelchair-accessible doors, ramps, and restrooms, and public telephones with volume controls.

Individuals with Disabilities Education Act (or IDEA): As its name implied, this legislation was more focused on education than either Section 504 or ADA. It was first passed in 1975 and has been amended several times since, including most recently in 2004 (PL 108-446, 2004). To be eligible under IDEA, a student must be adversely affected in oral expression, listening comprehension, written expression, basic reading skills, reading fluency skills, reading comprehension, mathematics calculation, or mathematics problem-solving. In its current form, the law guarantees the following rights related to education for anyone with a disability from birth to age 21. The first two influence schooling in general, but the last three affect the work of classroom teachers rather directly:

- *Free, appropriate education*: An individual or an individual's family should not have to pay for education simply because the individual has a disability, and the educational program should be truly educational; i.e., not merely care-taking or babysitting the person.
- *Due process*: In case of disagreements between an individual with a disability and the schools or other professionals, there must be procedures for resolving the disagreements that are fair and accessible to all parties, including the person himself or herself or the person's representative.
- *Fair evaluation of performance in spite of disability*: Tests or other evaluations should not assume test-taking skills that a person with a disability cannot reasonably be expected to have, such as holding a pencil, hearing or seeing questions, working quickly, or understanding and speaking orally. Evaluation procedures should be modified to allow for these differences. This provision of the law applies both to evaluations made by teachers and to school-wide or "high-stakes" testing programs.
- *Education in the "least restrictive environment"*: Education for someone with a disability should provide as many educational opportunities and options for the person as possible, both in the short term and in the long term. In practice, this requirement has meant including students in regular classrooms and school activities as much as possible, though often not totally.
- *An individualized educational program*: Given that every disability is unique, instructional planning for a person with a disability should be unique or individualized as well. In practice, this provision has led to classroom teachers planning individualized programs jointly with other professionals (like reading specialists, psychologists, or medical personnel) as part of a team.

Students with Disabilities

Students are eligible for the rights afforded under the IDEA if their academic achievement is being impacted due to a learning disability, autism spectrum disorder, visual or hearing impairment, orthopedic impairment, traumatic brain injury, speech or language impairment, intellectual disability, emotional disturbance, or other health impairment.

Learning Disabilities

A **Learning Disability** (or LD) is a specific impairment of academic learning that interferes with a specific aspect of schoolwork, and that reduces a student's academic performance significantly. An LD shows itself as a major discrepancy between a student's ability and some feature of achievement: The student may be delayed in reading, writing, listening, speaking, or doing mathematics, but not in all of these at once. A learning problem is not considered a learning disability if it stems from physical, sensory, or motor handicaps, or from generalized intellectual impairment. It is also not an LD if the learning problem really reflects the challenges of learning English as a second language. Genuine LDs are the learning problems left over after these other possibilities are accounted for or excluded. Typically, a student with an LD has not been helped by teachers' ordinary efforts to assist the student when he or she falls behind academically, though what counts as an "ordinary effort," of course, differs among teachers, schools, and students. Most importantly, though, an LD relates to a fairly specific area of academic learning. A student may be able to read and compute well enough, for example, but not be able to write. LDs are by far the most common form of special educational need, accounting for half of all students with special needs in the United States and anywhere from 5 to 20% of all students, depending on how the numbers are estimated (United States Department of Education, 2005; Ysseldyke & Bielinski, 2002). Students with LDs are so common, in fact, that most teachers regularly encounter at least one per class in any given school year, regardless of the grade level they teach.

These difficulties are identified in school because this is when children's academic abilities are being tested, compared, and measured. Consequently, once academic testing is no longer essential in that person's life (as when they are working rather than going to school), these disabilities may no longer be noticed or relevant, depending on the person's job and the extent of the disability.

https://youtu.be/RKCNqHEzLwQ

Video 7.2.1. Learning Disability explains the different types of disabilities and their symptoms.

Dyslexia is one of the most commonly diagnosed disabilities and involves having difficulty in the area of reading. This diagnosis is used for a number of reading difficulties. Common characteristics are difficulty with phonological processing, which includes the manipulation of sounds, spelling, and rapid visual/verbal processing. Additionally, the child may reverse letters, have difficulty reading from left to right, or may have problems associating letters with sounds. It appears to be rooted in neurological problems involving the parts of the brain active in recognizing letters, verbally responding, or being able to manipulate sounds. Recent studies have identified a number of genes that are linked to developing dyslexia (National Institute of Neurological Disorders and Stroke, 2016). Treatment typically involves altering teaching methods to accommodate the person's particular problematic area.

Dysgraphia, a writing disability, is often associated with dyslexia (Carlson, 2013). There are different types of dysgraphia, including phonological dysgraphia, when the person cannot sound out words and write them phonetically. Orthographic dysgraphia is demonstrated by those individuals who can spell regularly spelled words, but not irregularly spelled ones. Some individuals with dysgraphia experience difficulties in motor control and experience trouble forming letters when using a pen or pencil.

Dyscalculia refers to problems in math. Cowan and Powell (2014) identified several terms used when describing difficulties in mathematics, including dyscalculia, mathematical learning disability, and mathematics disorder. All three terms refer to students with average intelligence who exhibit poor academic performance in mathematics. When evaluating a group of third graders, Cowan and Powell (2014) found that children with dyscalculia demonstrated problems with working memory, reasoning, processing speed, and oral language, all of which are referred to as domain-general factors. Additionally, problems with multi-digit skills, including number system knowledge, were also exhibited.

https://assessments.lumenlearning.co...essments/16597

Autism Spectrum Disorder

Autism spectrum disorder (ASD) is probably the most misunderstood and puzzling of neurodevelopmental disorders. Children with this disorder show signs of significant disturbances in three main areas: (a) deficits in social interaction, (b) deficits in

communication, and (c) repetitive patterns of behavior or interests. These disturbances appear early in life and cause serious impairments in functioning (APA, 2013). The child with autism spectrum disorder might exhibit deficits in social interaction by not initiating conversations with other children or turning their head away when spoken to. These children do not make eye contact with others and seem to prefer playing alone rather than with others. In a certain sense, it is almost as though these individuals live in a personal and isolated social world others are simply not privy to or able to penetrate. Communication deficits can range from a complete lack of speech to one-word responses (e.g., saying “Yes” or “No” when replying to questions or statements that require additional elaboration), echoed speech (e.g., parroting what another person says, either immediately or several hours or even days later), to difficulty maintaining a conversation because of an inability to reciprocate others’ comments. These deficits can also include problems in using and understanding nonverbal cues (e.g., facial expressions, gestures, and postures) that facilitate normal communication.

Repetitive patterns of behavior or interests can be exhibited in a number of ways. The child might engage in stereotyped, repetitive movements (rocking, head-banging, or repeatedly dropping an object and then picking it up), or she might show great distress at small changes in routine or the environment. For example, the child might throw a temper tantrum if an object is not in its proper place or if a regularly- scheduled activity is rescheduled. In some cases, the person with autism spectrum disorder might show highly restricted and fixated interests that appear to be abnormal in their intensity. For instance, the child might learn and memorize every detail about something, even though doing so serves no apparent purpose. Importantly, autism spectrum disorder is not the same thing as intellectual disability, although these two conditions can occur together. The DSM-5 specifies that the symptoms of autism spectrum disorder are not caused or explained by intellectual disability.
The qualifier “spectrum” in autism spectrum disorder is used to indicate that individuals with the disorder can show a range, or spectrum, of symptoms that vary in their magnitude and severity: Some severe, others less severe. The previous edition of the DSM included a diagnosis of Asperger’s disorder, generally recognized as a less severe form of autistic disorder; individuals diagnosed with Asperger’s disorder were described as having average or high intelligence and strong vocabulary, but exhibiting impairments in social interaction and social communication, such as talking only about their special interests (Wing, Gould, & Gillberg, 2011). However, because research has failed to demonstrate that Asperger’s disorder differs qualitatively from autistic disorder, the DSM-5 does not include it. Some individuals with autism spectrum disorder, particularly those with better language and intellectual skills, can live and work independently as adults. However, most do not because the symptoms remain sufficient to cause serious impairment in many realms of life (APA, 2013).

Currently, estimates indicate that nearly 1 in 88 children in the United States have autism spectrum disorder; the disorder is 5 times more common in boys (1 out of 54) than girls (1 out of 252) (CDC, 2012). Rates of autistic spectrum disorder have increased dramatically since the 1980s. For example, California saw an increase of 273% in reported cases from 1987 through 1998 (Byrd, 2002); between 2000 and 2008, the rate of autism diagnoses in the United States increased 78% (CDC, 2012). Although it is difficult to interpret this increase, it is possible that the rise in prevalence is the result of the broadening of the diagnosis, increased efforts to identify cases in the community, and greater awareness and acceptance of the diagnosis. In addition, mental health professionals are now more knowledgeable about autism spectrum disorder and are better equipped to make the diagnosis, even in subtle cases (Novella, 2008).

The exact causes of autism spectrum disorder remain unknown despite massive research efforts over the last two decades (Meek, Lemery-Chalfant, Jahromi, & Valiente, 2013). Autism appears to be strongly influenced by genetics, as identical twins show concordance rates of 60%– 90%, whereas concordance rates for fraternal twins and siblings are 5%–10% (Autism Genome Project Consortium, 2007). Many different genes and gene mutations have been implicated in autism (Meek et al., 2013). Among the genes involved are those important in the formation of synaptic circuits that facilitate communication between different areas of the brain (Gauthier et al., 2011). A number of environmental factors are also thought to be associated with increased risk for autism spectrum disorder, at least in part, because they contribute to new mutations. These factors include exposure to pollutants, such as plant emissions and mercury, urban versus rural residence, and vitamin D deficiency (Kinney, Barch, Chayka, Napoleon, & Munir, 2009).

There is no scientific evidence that a link exists between autism and vaccinations (Hughes, 2007). Indeed, a recent study compared the vaccination histories of 256 children with autism spectrum disorder with that of 752 control children across three time periods during their first two years of life (birth to 3 months, birth to 7 months, and birth to 2 years) (DeStefano, Price, & Weintraub, 2013). At the time of the study, the children were between 6 and 13 years old, and their prior vaccination records were obtained. Because vaccines contain immunogens (substances that fight infections), the investigators examined medical records to see how many immunogens children received to determine if those children who received more immunogens were at greater risk for developing autism spectrum disorder. The results of this study clearly demonstrated that the number of immunogens from vaccines received during the first two years of life was not at all related to the development of autism spectrum disorder.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 7.2.2. Autism Spectrum Disorder discusses the range of symptoms associated with ASD.

Other Health Impairment

Attention Deficit Hyperactivity Disorder (ADHD) is not a learning disability but can be considered as an 'other health impairment' if it is impacting academic performance. Individuals with ADHD show a constant pattern of inattention and/or hyperactive and impulsive behavior that interferes with normal functioning (American Psychological Association (APA), 2013). Some of the signs of inattention include great difficulty with, and avoidance of, tasks that require sustained attention (such as conversations or reading), failure to follow instructions (often resulting in failure to complete schoolwork and other duties), disorganization (difficulty keeping things in order, poor time management, sloppy and messy work), lack of attention to detail, becoming easily distracted, and forgetfulness. Hyperactivity is characterized by excessive movement, and includes fidgeting or squirming, leaving one's seat in situations when remaining seated is expected, having trouble sitting still (e.g., in a restaurant), running about and climbing on things, blurting out responses before another person's question or statement has been completed, difficulty waiting one's turn for something, and interrupting and intruding on others. Frequently, the hyperactive child comes across as noisy and boisterous. The child's behavior is hasty, impulsive, and seems to occur without much forethought; these characteristics may explain why adolescents and young adults diagnosed with ADHD receive more traffic tickets and have more automobile accidents than do others their age (Thompson, Molina, Pelham, & Gnagy, 2007).

ADHD occurs in about 5% of children (APA, 2013). On average, boys are 3 times more likely to have ADHD than are girls; however, such findings might reflect the greater propensity of boys to engage in aggressive and antisocial behavior and thus incur a greater likelihood of being referred to psychological clinics (Barkley, 2006). Children with ADHD face severe academic and social challenges. Compared to their non-ADHD counterparts, children with ADHD have lower grades and standardized test scores and higher rates of expulsion, grade retention, and dropping out (Loe & Feldman, 2007). They also are less well-liked and more often rejected by their peers (Hoza et al., 2005).

Video 7.2.3. Attention Deficit Hyperactivity Disorder explains the symptoms associated with the three types of ADHD.

Is the prevalence rate of ADHD increasing? Many people believe that the rates of ADHD have increased in recent years, and there is evidence to support this contention. In a recent study, investigators found that the parent-reported prevalence of ADHD among children (4–17 years old) in the United States increased by 22% during a 4-year period, from 7.8% in 2003 to 9.5% in 2007 (CDC, 2010). ADHD may be over-diagnosed by doctors who are too quick to medicate children as behavior treatment. There is also greater awareness of ADHD now than in the past. Nearly everyone has heard of ADHD, and most parents and teachers are aware of its key symptoms. Thus, parents may be quick to take their children to a doctor if they believe their child possesses these symptoms, or teachers may be more likely now than in the past to notice the symptoms and refer the child for evaluation.

ADHD can persist into adolescence and adulthood (Barkley, Fischer, Smallish, & Fletcher, 2002). A recent study found that 29.3% of adults who had been diagnosed with ADHD decades earlier still showed symptoms (Barbaresi et al., 2013). Somewhat troubling, this study also reported that nearly 81% of those whose ADHD persisted into adulthood had experienced at least one other comorbid disorder, compared to 47% of those whose ADHD did not persist. Additional concerns when an adult has ADHD include worse educational attainment, lower socioeconomic status, less likely to be employed, more likely to be divorced, and more likely to have non-alcohol-related substance abuse problems (Klein et al., 2012).

Family and twin studies indicate that genetics play a significant role in the development of ADHD. Burt (2009), in a review of 26 studies, reported that the median rate of concordance for identical twins was .66, whereas the median concordance rate for fraternal twins was .20. The specific genes involved in ADHD are thought to include at least two that are important in the regulation of the neurotransmitter dopamine (Gizer, Ficks, & Waldman, 2009), suggesting that dopamine may be important in ADHD. Indeed, medications used in the treatment of ADHD, such as methylphenidate (Ritalin) and amphetamine with dextroamphetamine (Adderall), have stimulant qualities and elevate dopamine activity. People with ADHD show less dopamine

activity in key regions of the brain, especially those associated with motivation and reward (Volkow et al., 2009), which provides support to the theory that dopamine deficits may be a vital factor in the development this disorder (Swanson et al., 2007).

Brain imaging studies have shown that children with ADHD exhibit abnormalities in their frontal lobes, an area in which dopamine is in abundance. Compared to children without ADHD, those with ADHD appear to have smaller frontal lobe volume, and they show less frontal lobe activation when performing mental tasks. Recall that one of the functions of the frontal lobes is to inhibit our behavior. Thus, abnormalities in this region may go a long way toward explaining the hyperactive, uncontrolled behavior of ADHD.

Many parents attribute their child's hyperactivity to sugar. A statistical review of 16 studies, however, concluded that sugar consumption has no effect at all on the behavioral and cognitive performance of children (Wolraich, Wilson, & White, 1995). Additionally, although food additives have been shown to increase hyperactivity in non-ADHD children, the effect is rather small (McCann et al., 2007). Numerous studies, however, have shown a significant relationship between exposure to nicotine in cigarette smoke during the prenatal period and ADHD (Linnet et al., 2003). Maternal smoking during pregnancy is associated with the development of more severe symptoms of the disorder (Thakur et al., 2013).

Recommended treatment for ADHD includes behavioral interventions, cognitive behavioral therapy, parent and teacher education, recreational programs, and lifestyle changes, such as getting more sleep (Clay, 2013). For some children, medication is prescribed. Parents are often concerned that stimulant medication may result in their child acquiring a substance use disorder. However, research using longitudinal studies has demonstrated that children diagnosed with ADHD who received pharmacological treatment had a lower risk for substance abuse problems than those children who did not receive medication (Wilens, Fararone, Biederman, & Gunawardene, 2003). The risk of substance abuse problems appears to be even greater for those with ADHD who are un-medicated and also exhibit antisocial tendencies (Marshal & Molina, 2006).

https://assessments.lumenlearning.co...essments/16598

Candela Citations

CC licensed content, Original

- Education. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...ter/education/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Educational Psychology. **Authored by**: Kelvin Seifert and Rosemary Sutton. **Provided by**: The Saylor Foundation. **Retrieved from**: https://resources.saylor.org/wwwreso...hology.pdf.%20. **License**: CC BY: Attribution
- Lifespan Development. **Authored by**: Martha Lally and Suzanne Valentine-French. **Provided by**: College of Lake County Foundation . **Retrieved from**: http://dept.clcillinois.edu/psy/Life...evelopment.pdf. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

All rights reserved content

- Learning Disability. **Provided by**: Osmosis. **Retrieved from**: https://youtu.be/RKCNqHEzLwQ. **License**: All Rights Reserved
- Autism Spectrum Disorder. **Provided by**: Osmosis. **Retrieved from**: https://youtu.be/x2hWVgZ8J4A. **License**: All Rights Reserved
- Attention Deficit Hyperactivity Diorder. **Provided by**: Osmosis. **Retrieved from**: https://youtu.be/vQRh_VMA7Vc. **License**: All Rights Reserved

This page titled 7.1: Education is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

7.2: Understanding Learning Difficulties

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 8.3.1. *How Difficult Can This Be? The F.A.T. City Workshop* depicts a series of simulations to help non-learning disabled people understand what it is like to have learning difficulties. Rick Lavoie also provides suggestions for how to help students facing these challenges.

Questions

Below are several questions to help guide your learning while you watch the video.

Introduction

What does F.A.T stand for in this video?

Anxiety

What is a typical reaction humans have when experiencing anxiety? What do we insist kids do when they respond in this way?

Processing

When the teacher asks a question how are mainstream and learning disabled (LD) children different in processing that questions?

Risk-Taking

How do we unintentionally decrease the likelihood of LD students from taking risks?

Visual Perception

Can we motivate LD children to “try harder” when something is too difficult? Why or why not?

Reading Comprehension

Reading comprehension has more to do with _____, not vocabulary!

Effects of Perception on Behavior

Why do LD students often say “I didn’t do anything wrong” or “I don’t know what I did” when they get into trouble?

Visual-Motor Coordination

How does difficulty with visual-motor integration effect some LD students?

Oral Expression

What is dysnomia? Why are LD students more likely to experience high rates of this?

Reading & Decoding

Children that are able to decode words to read may not be comprehending what is read. What explanation does the video offer for why this happens?

Auditory-Visual Capability

Why do books on tape benefit some LD students?

Fairness

According to the video, what is fairness?

Commentary

What were some of the effects that the participants reported feeling during this simulation? Is this a fair representation as to what LD students may experience?

Candela Citations

CC licensed content, Original

- Understanding Learning Difficulties. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...-difficulties/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

All rights reserved content

- How Difficult Can This Be? The F.A.T. City Workshop. **Authored by**: Richard Lavoie. **Retrieved from**: https://youtu.be/Q3UNdbxk3xs. **License**: All Rights Reserved

This page titled 7.2: Understanding Learning Difficulties is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

7.3: Academic Achievement

Academic achievement during adolescence is predicted by interpersonal (e.g., parental engagement in adolescents' education), intrapersonal (e.g., intrinsic motivation), and institutional (e.g., school quality) factors. Academic achievement is important in its own right as a marker of positive adjustment during adolescence but also because academic achievement sets the stage for future educational and occupational opportunities. The most serious consequence of school failure, particularly dropping out of school, is the high risk of unemployment or underemployment in adulthood that follows. High achievement can set the stage for college or future vocational training and opportunities.

Parental Engagement with School

As adolescents become more independent in managing their academic roles, they still may need parental support to be successful in school. Parents vary in their level of involvement with their children's schools. Teachers often complain that they have difficulty getting parents to participate in their child's education and devise a variety of techniques to keep parents in touch with daily and overall progress. For example, parents may be required to sign a behavior chart each evening to be returned to school or may be given information about the school's events through websites and newsletters. There are other factors that need to be considered when looking at parental involvement. To explore these, first, ask yourself if all parents who enter the school with concerns about their child be received in the same way?

Horvat (2004) found that teachers seek a particular type of involvement from particular types of parents. While teachers thought they were open and neutral in their responses to parental involvement, in reality, teachers were most receptive to support, praise, and agreement coming from parents who were most similar in race and social class with the teachers. Parents who criticized the school or its policies were less likely to be given a voice. Parents who have higher levels of income, occupational status, and other qualities favored in society have **family capital.** This is a form of power that can be used to improve a child's education. Parents who do not have these qualities may find it more difficult to be effectively involved. The authors suggest that teachers closely examine their biases against parents. Schools may also need to examine their ability to dialogue with parents about school policies in more open ways. Any efforts to improve effective parental involvement should address these concerns.

Motivation to Achieve

Motivation varies and is demonstrated by the kind of goals that students set for themselves, and by how the goals support students' academic achievement. As you might suspect, some goals encourage academic achievement more than others, but even motives that do not concern academics explicitly tend to affect learning indirectly.

What kinds of achievement goals do students hold? Some students' goal may be to learn the material as well as possible because they find it interesting and because they believe it will be useful later—this is a mastery goal because they want primarily to learn or master the material. Other students are concerned less about learning the content than about getting high grades in the course—this is a performance goal because the focus is primarily on looking successful by performing well in the eyes of peers and teachers. There may also be students that are primarily concerned about avoiding a poor or failing mark—this is a performance-avoidance goal because they are not really as concerned about learning or about competitive success but is simply intending to avoid failure.

As you might imagine, mastery, performance, and performance-avoidance goals often are not experienced in pure form, but in combinations. If you play the clarinet in the school band, you might want to improve your technique simply because you enjoy playing as well as possible—essentially a mastery orientation. But you might also want to look talented in the eyes of classmates—a performance orientation. Another part of what you may wish, at least privately, is to avoid looking like a complete failure at playing the clarinet. One of these motives may predominate over the others, but they all may be present.

Mastery goals tend to be associated with the enjoyment of learning the material at hand, and in this sense, represent an outcome that teachers often seek for students. By definition, therefore, they are a form of **intrinsic motivation**. As such, mastery goals have been found to be better than performance goals at sustaining students' interest in a subject. In one review of research about learning goals, for example, students with primarily mastery orientations toward a course they were taking not only tended to express greater interest in the course, but also continued to express interest well beyond the official end of the course, and to enroll in further courses in the same subject (Harackiewicz, et al., 2002; Wolters, 2004).

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 7.3.1. Instincts, Arousal, Needs, and Drives: Drive-Reduction and Cognitive Theories explain some intrinsic motivations.

Performance goals, on the other hand, imply **extrinsic motivation** and tend to show the mixed effects of this orientation. A positive effect is that students with a performance orientation do tend to get higher grades than those who express primarily a mastery orientation. The advantage in grades occurs both in the short term (with individual assignments) and in the long term (with overall grade point average when graduating). But there is evidence that performance-oriented students do not actually learn the material as deeply or permanently as students who are more mastery-oriented (Midgley, Kaplan, & Middleton, 2001). A possible reason is that measures of performance—such as test scores—often reward relatively shallow memorization of information and therefore guide performance-oriented students away from processing the information thoughtfully or deeply. Another possible reason is that a performance orientation, by focusing on gaining recognition as the best among peers, encourages competition among peers. Giving and receiving help from classmates is thus not in the self-interest of a performance-oriented student, and the resulting isolation limits the student's learning.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 7.3.2. Incentive Theory explains extrinsic motivation.

As we mentioned, failure-avoidant goals by nature undermine academic achievement. Often they are a negative byproduct of the competitiveness of performance goals (Urdan, 2004). If a teacher (and sometimes also fellow students) put too much emphasis on being the best in the class, and if interest in learning the material as such therefore suffers, then some students may decide that success is beyond their reach or may not be desirable in any case. The alternative—simply avoiding failure—may seem wiser as well as more feasible. Once a student adopts this attitude, he or she may underachieve more or less deliberately, doing only the minimum work necessary to avoid looking foolish or to avoid serious conflict with the teacher. Avoiding failure in this way is an example of **self-handicapping**—deliberate actions and choices that reduce the chances of success. Students may self-handicap in a number of ways; in addition to not working hard, they may procrastinate about completing assignments, for example, or set goals that are unrealistically high.

The Wold of School

Remember Urie Brofenbrenner's **ecological systems model** we learned about when we first examined theories of development? This model helps us understand an individual by examining the contexts in which the person lives and the direct and indirect influences on that person's life. School becomes a very important component of children's lives during middle childhood and one way to understand children is to look at the world of school. We have discussed educational policies that impact the curriculum in schools above. Now let's focus on the school experience from the standpoint of the student, the teacher and parent relationship, and the cultural messages or hidden curriculum taught in schools in the United States.

Parents vary in their level of involvement with their children's schools. Teachers often complain that they have difficulty getting parents to participate in their child's education and devise a variety of techniques to keep parents in touch with daily and overall

progress. For example, parents may be required to sign a behavior chart each evening to be returned to school or may be given information about the school's events through websites and newsletters. There are other factors that need to be considered when looking at parental involvement. To explore these, first, ask yourself if all parents who enter the school with concerns about their child are received in the same way? If not, what would make a teacher or principal more likely to consider the parent's concerns? What would make this less likely?

Lareau and Horvat (2004) found that teachers seek a particular type of involvement from particular types of parents. While teachers thought they were open and neutral in their responses to parental involvement, in reality, teachers were most receptive to support, praise, and agreement coming from parents who were most similar in race and social class with the teachers. Parents who criticized the school or its policies were less likely to be given a voice. Parents who have higher levels of income, occupational status, and other qualities favored in society have family capital. This is a form of power that can be used to improve a child's education. Parents who do not have these qualities may find it more difficult to be effectively involved. Lareau and Horvat (2004) offer three cases of African-American parents who were each concerned about discrimination in the schools. Despite evidence that such discrimination existed, their children's white, middle-class teachers were reluctant to address the situation directly. Note the variation in approaches and outcomes for these three families:

- The Williams family: This working-class, African-American couple, a minister and a hairstylist, voiced direct complaints about discrimination in the schools. Their claims were thought to undermine the authority of the school and as a result, their daughter was kept in a lower reading class. However, her grade was boosted to "avoid a scene" and the parents were not told of this grade change.
- The Irving family: This middle-class, African-American couple was concerned that the school was discriminating against black students. They fought against it without using direct confrontation by staying actively involved in their daughter's schooling and making frequent visits to the school to make sure that discrimination could not occur. They also talked with other African-American teachers and parents about their concerns.
- Ms. Caldron: This poor, single-parent was concerned about discrimination in the school. She was a recovering drug addict receiving welfare. She did not discuss her concerns with other parents because she did not know the other parents and did not monitor her child's progress or get involved with the school. She felt that her concerns would not receive attention. She requested spelling lists from the teacher on several occasions but did not receive them. The teacher complained that Ms. Caldron did not sign forms that were sent home for her signature.

Working within the system without direct confrontation seemed to yield better results for the Irvings, although the issue of discrimination in the school was not completely addressed. Ms. Caldron was the least involved and felt powerless in the school setting. Her lack of family capital and lack of knowledge and confidence keep her from addressing her concerns with the teachers. What do you think would happen if she directly addressed the teachers and complained about discrimination? Chances are, she would be dismissed as undermining the authority of the school, just as the Masons, and might be thought to lack credibility because of her poverty and drug addiction. The authors of this study suggest that teachers closely examine their biases against parents. Schools may also need to examine their ability to dialogue with parents about school policies in more open ways. What happens when parents have concerns over school policy or view student problems as arising from flaws in the educational system? How are parents who are critical of the school treated? And are their children treated fairly even when the school is being criticized? Certainly, any efforts to improve effective parental involvement should address these concerns.

Student Perspectives

Imagine being a 3rd-grader for one day in public school. What would the daily routine involve? To what extent would the institution dictate the activities of the day and how much of the day would you spend on those activities? Would you always be on task? What would you say if someone asked you how your day went? or "What happened in school today?" Chances are, you would be more inclined to talk about whom you sat at lunch with or who brought a puppy to class than to describe how fractions are added.

Ethnographer and Professor of Education Peter McLaren (1999) describes the student's typical day as filled with constrictive and unnecessary ritual that has a damaging effect on the desire to learn. Students move between various states as they negotiate the demands of the school system and their own personal interests. The majority of the day (298 minutes) takes place in the **student state**. This state is one in which the student focuses on a task or tries to stay focused on a task, is passive, compliant, and often frustrated. Long pauses before getting out the next book or finding materials sometimes indicate that frustration. The **street corner state** is one in which the child is playful, energetic, excited, and expresses personal opinions, feelings, and beliefs. About 66 minutes a day take place in this state. Children try to maximize this by going slowly to assemblies or when getting a hall pass-always eager to say 'hello' to a friend or to wave if one of their classmates is in another room. This is the state in which friends talk and play. In fact, teachers sometimes reward students with opportunities to move freely or to talk or to be themselves. But when students initiate the street corner state on their own, they risk losing recess time, getting extra homework, or being

ridiculed in front of their peers. The **home state** occurs when parents or siblings visit the school. Children in this state may enjoy special privileges such as going home early or being exempt from certain school rules in the mother's presence, or it can be difficult if the parent is there to discuss trouble at school with a staff member. The **sanctity state** is a time in which the child is contemplative, quiet, or prayerful. Typically the sanctity state is a very brief part of the day.

Since students seem to have so much enthusiasm and energy in street corner states, what would happen if the student and street corner states could be combined? Would it be possible? Many educators feel concerned about the level of stress children experience in school. Some stress can be attributed to problems in friendship. And some can be a result of the emphasis on testing and grades, as reflected in a Newsweek article entitled "The New First Grade: Are Kids Getting Pushed Too Fast Too Soon?" (Tyre, 2006). This article reports concerns of a principal who worries that students begin to burn out as early as 3rd grade. In the book, The Homework Myth: Why Our Kids Get Too Much of a Bad Thing, Kohn (2006) argues that neither research nor experience support claims that homework reinforces learning and builds responsibility. Why do schools assign homework so frequently? A look at cultural influences on education may provide some answers.

https://assessments.lumenlearning.co...essments/16601

Cultural Influences

Another way to examine the world of school is to look at the cultural values, concepts, behaviors and roles that are part of the school experience but are not part of the formal curriculum. These are part of the **hidden curriculum** but are nevertheless very powerful messages. The hidden curriculum includes ideas of patriotism, gender roles, the ranking of occupations and classes, competition, and other values. Teachers, counselors, and other students specify and make known what is considered appropriate for girls and boys. The gender curriculum continues into high school, college, and professional school. Students learn a ranking system of occupations and social classes as well. Students in gifted programs or those moving toward college preparation classes may be viewed as superior to those who are receiving tutoring.

Gracy (2004) suggests that cultural training occurs early. Kindergarten is an "academic boot camp" in which students are prepared for their future student role-that of complying with an adult imposed structure and routine designed to produce docile, obedient, children who do not question meaningless tasks that will become so much of their future lives as students. A typical day is filled with structure, ritual, and routine that allows for little creativity or direct, hands-on contact. "Kindergarten, therefore, can be seen as preparing children not only for participation in the bureaucratic organization of large modern school systems, but also for the large-scale occupational bureaucracies of modern society." (Gracy, 2004, p. 148)

Emphasizing math and reading in preschool and kindergarten classes is becoming more common in some school districts. It is not without controversy, however. Some suggest that emphasis is warranted in order to help students learn math and reading skills that will be needed throughout school and in the world of work. This will also help school districts improve their accountability through test performance. Others argue that learning is becoming too structured to be enjoyable or effective and that students are being taught only to focus on performance and test-taking. Students learn student incivility or lack of sincere concern for politeness and consideration of others is taught in kindergarten through 12th grades through the "what is on the test" mentality modeled by teachers. Students are taught to accept routinized, meaningless information in order to perform well on tests. And they are experiencing the stress felt by teachers and school districts focused on test scores and taught that their worth comes from their test scores. Genuine interest, an appreciation of the process of learning, and valuing others are important components of success in the workplace that are not part of the hidden curriculum in today's schools.

What Happened to No child Left Behind?

Children's academic performance is often measured with the use of standardized tests. **Achievement tests** are used to measure what a child has already learned. Achievement tests are often used as measures of teaching effectiveness within a school setting and as a method to make schools that receive tax dollars (such as public schools, charter schools, and private schools that receive vouchers) accountable to the government for their performance. In 2001, President Bush signed into effect Public Law 107-110, better known as the **No Child Left Behind Act** mandating that schools administer achievement tests to students and publish those results so that parents have an idea of their children's performance. Additionally, the government would have information on the gaps in educational achievement between children from various social class, racial, and ethnic groups. Schools that showed significant gaps in these levels of performance were mandated to work toward narrowing these gaps. Educators criticized the policy for focusing too much on testing as the only indication of student performance. Target goals were considered unrealistic and set by the federal government rather than individual states. Because these requirements became increasingly unworkable for schools, changes to the law were requested. On December 12, 2015 President Obama signed into law the **Every Student**

Succeeds Act (ESSA). This law is state driven and focuses on expanding educational opportunities and improving student outcomes, including in the areas of high school graduation, drop-out rates, and college attendance.

Middle School

Adolescents spend more waking time in school than in any other context (Eccles & Roeser, 2011). **Secondary education** is traditionally grades 7-12 and denotes the school years after elementary school (known as primary education) and before college or university (known as tertiary education). Adolescents who complete primary education (learning to read and write) and continue on through secondary and tertiary education tend to also have better health, wealth, and family life (Rieff, 1998). Because the average age of puberty has declined over the years, **middle schools** were created for grades 5 or 6 through 8 as a way to distinguish between early adolescence and late adolescence, especially because these adolescents different biologically, cognitively, and emotionally and definitely have different needs.

Transition to middle school is stressful, and the transition is often complex. When students transition from elementary to middle school, many students are undergoing physical, intellectual, social, emotional, and moral changes (Parker, 2013). Research suggests that early adolescence is an especially sensitive developmental period (McGill et al., 2012). Some students mature faster than others. Students who are developmentally behind typically experience more stress than their counterparts (U.S. Department of Education, 2008). Consequently, they may earn lower grades and display decreased academic motivation, which may increase the rate of dropping out of school (U.S. Department of Education, 2008). For many middle school students, academic achievement slows down, and behavioral problems can increase.

While young adolescents seem to desire independence, they also need protection, security, and structure (Brighton, 2007). Baly, Cornell, & Lovegrove (2014) found that bullying increases in middle school, particularly in the first year. Additionally, unlike elementary school, concerns arise regarding procedural changes. Just when egocentrism is at its height, students are worried about being thrown into an environment of independence and responsibility. They are expected to get to and from classes on their own, manage time wisely, organize and keep up with materials for multiple classes, be responsible for all classwork and homework from multiple teachers, and at the same time develop and maintain a social life (Meece & Eccles, 2010). Students are trying to build new friendships and maintain the ones they already have. As noted throughout this module, peer acceptance is particularly important.

Another aspect to consider is technology. Typically, adolescents get their first cell phone at about age 11, and, simultaneously, they are also expected to research items on the Internet. Social media use and texting increase dramatically, and the research finds both harm and benefits to this use (Coyne et al., 2018).

High School

As adolescents enter high school, their continued cognitive development allows them to think abstractly, analytically, hypothetically, and logically, which is all formal operational thought. High school emphasizes formal thinking in an attempt to prepare graduates for college where analysis is required. Overall, high school graduation rates in the United States have increased steadily over the past decade, reaching 83.2% in 2016 after four years in high school (Gewertz, 2017). Additionally, many students in the United States do attend college. Unfortunately, though, about half of those who go to college leave without a degree (Kena et al., 2016). Those that do earn a degree, however, do make more money and have an easier time finding employment. The key here is understanding adolescent development and supporting teens in making decisions about college or alternatives to college after high school.

High School Dropouts

The **status dropout rate** refers to the percentage of 16 to 24 year-olds who are not enrolled in school and do not have high school credentials (either a diploma or an equivalency credential such as a General Educational Development [GED] certificate). The dropout rate is based on sample surveys of the civilian, noninstitutionalized population, which excludes persons in prisons, persons in the military, and other persons not living in households. The dropout rate among high school students has declined from a rate of 12% in 1990 to 7% in 2013 (U.S. Department of Education, 2015). The rate is lower for Whites than for Blacks, and the rates for both Whites and Blacks are lower than the rate for Hispanics. However, the gap between Whites, Blacks, and Hispanics have narrowed (see Figure 7.2).

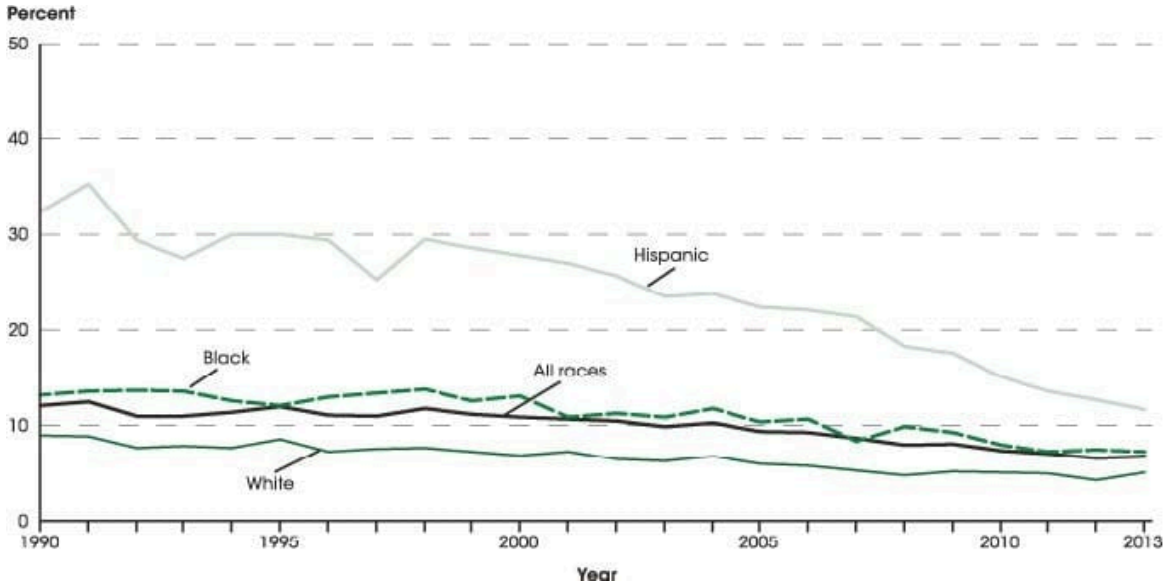


Figure: 7.3.1. Status dropout rates of 16- through 24-year-olds, by race/ethnicity: 1990 through 2013

The dropout rate for males in 1990 was 12%, where it stayed until 2000. Thereafter the rate dropped to 7% in 2013. The dropout rate for females in 1990 was 12%, where it dropped to 10% in 2000, and in 2013 was 6%. From 1997 until 2012, the rate for males was appreciably higher than for females, while in 2013, the gender difference was minimal (U.S. Department of Education, 2015).

Higher Education

College is an important aspect of the lives of many young adults in the United States, with 36% of 18 to 24-year-olds (NCHEMS, 2016b). The rate of college attainment has grown more slowly in the United States than in a number of other nations in recent years (OCED, 2014). This may be due to the fact that the cost of attaining a degree is higher in the U.S. than in many other nations.

As the level of State funding of higher education declines, students are finding that the cost of college is outpacing the rate of inflation, Pell grant increases, and other student scholarships. One in six students are funding their education through personal loans (TICAS, 2015). With the rising costs of higher education, various news headlines have asked if a college education is worth the cost. One way to address this question is in terms of the earning potential associated with various levels of educational achievement. In 2016, the average earnings for Americans 25 and older with only a high school education was $35,615, compared with $65,482 for those with a bachelor's degree, compared with $92,525 for those with more advanced degrees. Average earnings vary by gender, race, and geographical location in the United States (U.S. Census Bureau, 2017).

Nonetheless, the benefits both to the individual and society outweigh the initial costs. As can be seen in Figure 7.3, those in America with the most advanced degrees earn the highest income and have the lowest unemployment.

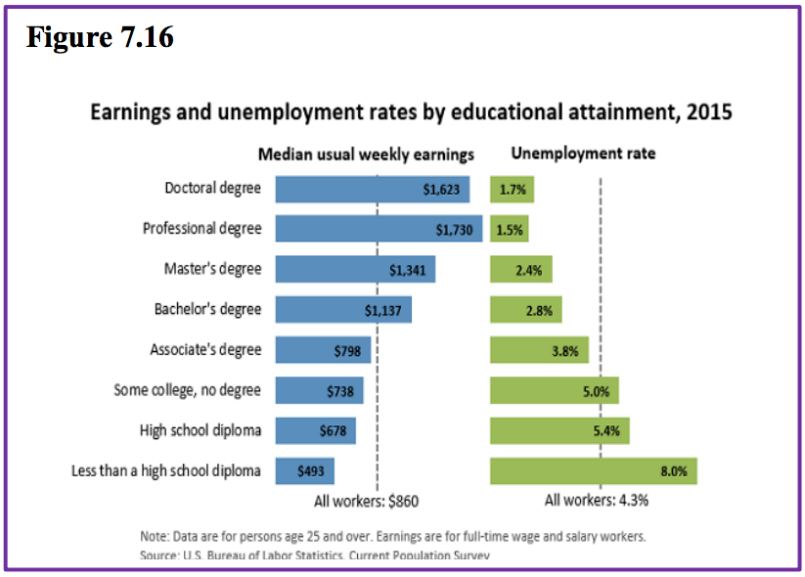


Figure 7.3.2. Earning and unemployment rate by education attainment, 2015.

Worldwide, over 80% of college-educated adults are employed, compared with just over 70% of those with a high school or equivalent diploma, and only 60% of those with no high school diploma (OECD, 2015). Those with a college degree will earn more over the course of their lifetime. Moreover, the benefits of a college education go beyond employment and finances. The OECD found that around the world, adults with higher educational attainment were more likely to volunteer, felt they had more control over their lives, and thus were more interested in the world around them. Studies of U.S. college students find that they gain a more distinct identity and become more socially competent, less dogmatic, and ethnocentric compared to those not in college (Pascarella, 2006).

Who is Going to College?

Each generation tends to earn (and perhaps need) increased levels of formal education. As we can see in Figure 7.4, approximately one-third of the American adult population has a bachelor's degree or higher, as compared with less than 5% in 1940. Educational attainment rates vary by gender and race. All races combined, women are slightly more likely to have graduated from college than men; that gap widens with graduate and professional degrees. However, wide racial disparities still exist. For example, 23% of African-Americans have a college degree, and only 16.4% of Hispanic Americans have a college degree, compared to 37% of non-Hispanic white Americans. The college graduation rates of African-Americans and Hispanic Americans have been growing in recent years. However, the rate has doubled since 1991 for African-Americans, and it has increased by 60% in the last two decades for Hispanic-Americans.

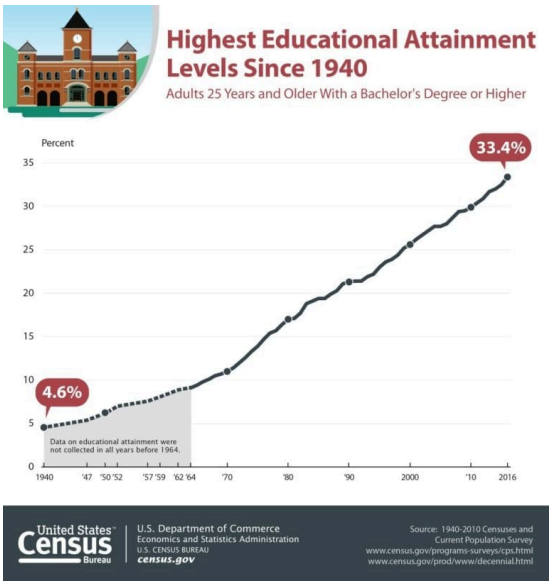


Figure 7.3.3. Higher education attainment for adults over age 25.

What about those young or emerging adults graduating high school today—is the majority of that group going to college? According to the U.S. Bureau of Labor Statistics (2017), 66.7% of youth ages 16-24 who graduated high school between January and October 2017 were enrolled in colleges or universities in October 2017. There were gender differences (71.7% of females vs. 61.1% of males) and racial differences (83% of Asians, 67.1% of non-Hispanic whites, 61% Hispanics, and 59.4% Blacks). Not all of these students will persist and earn college degrees, however (U.S. Census Bureau, 2017).

Higher Education and Career Preparation

Of concern in recent years is the relationship between higher education and the workplace. In 2005, American educator and then Harvard University President, Derek Bok, called for a closer alignment between the goals of educators and the demands of the economy. Companies outsource much of their work, not only to save costs but to find workers with the skills they need. What is required to do well in today's economy? Colleges and universities, he argued, need to promote global awareness, critical thinking skills, the ability to communicate, moral reasoning, and responsibility in their students. Regional accrediting agencies and state organizations provide similar guidelines for educators. Workers need skills in listening, reading, writing, speaking, global awareness, critical thinking, civility, and computer literacy—all skills that enhance success in the workplace.

More than a decade later, the question remains: does formal education prepare young adults for the workplace? It depends on whom you ask. In an article referring to information from the National Association of Colleges and Employers' 2018 Job Outlook Survey, Bauer-Wolf (2018) explains that employers perceive gaps in students' competencies, but many graduating college seniors are overly confident. The biggest difference was in perceived professionalism and work ethic (only 43% of employers thought that students are competent in this area compared to 90% of the students) (Bauer-Wolf, 2018). Similar differences were also found in terms of oral communication, written communication, and critical thinking skills. Only in terms of digital technology skills were more employers confident about students' competencies than were the students (66% compared to 60%).

It appears that students need to learn what some call "soft skills," as well as the particular knowledge and skills within their college major. As education researcher Loni Bordoloi Pazich (2018) noted, most American college students today are enrolling in business or other pre-professional programs and to be effective and successful workers and leaders, they would benefit from the communication, teamwork, and critical thinking skills, as well as the content knowledge, gained from liberal arts education (Bordoloi Pazich, 2018). In fact, two-thirds of children starting primary school now will be employed in jobs in the future that currently do not exist. Therefore, students cannot learn every single skill or fact that they may need to know, but they can learn how to learn, think, research, and communicate well so that they are prepared to continually learn new things and adapt effectively in their careers and lives since the economy, technology, and global markets will continue to evolve (Henseler, 2017).

Candela Citations

CC licensed content, Original

- Academic Achievement. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...c-achievement/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Educational Psychology. **Authored by**: Kelvin Seifert and Rosemary Sutton. **Provided by**: Saylor Foundation. **Retrieved from**: https://resources.saylor.org/wwwreso...Psychology.pdf. **License**: CC BY: Attribution
- Lifespan Development. **Authored by**: Martha Lally and Suzanne Valentine-French. **Provided by**: College of Lake County Foundation . **Retrieved from**: http://dept.clcillinois.edu/psy/Life...evelopment.pdf. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Specific attribution

- Instincts, Arousal, Needs, Drives: Drive-Reduction and Cognitive Theories. **Authored by**: Shreena Desai. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/LHnHXS51J4E. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

This page titled 7.3: Academic Achievement is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

7.4: Work and Career

Working Teens

Many adolescents work either summer jobs or during the school year. Holding a job may offer teenagers extra funds, the opportunity to learn new skills, ideas about future careers, and perhaps the true value of money. However, there are numerous concerns about teenagers working, especially during the school year. A long-standing concern is that that it "engenders precocious maturity of more adult-like roles and problem behaviors" (Staff, VanEseltine, Woolnough, Silver, & Burrington, 2011, p. 150). Several studies have found that working more than 20 hours per week can lead to declines in grades, a general disengagement from school (Staff, Schulenberg, & Bachman, 2010; Lee & Staff, 2007; Marsh & Kleitman, 2005), an increase in substance abuse (Longest & Shanahan, 2007), engaging in earlier sexual behavior, and pregnancy (Staff et al., 2011).

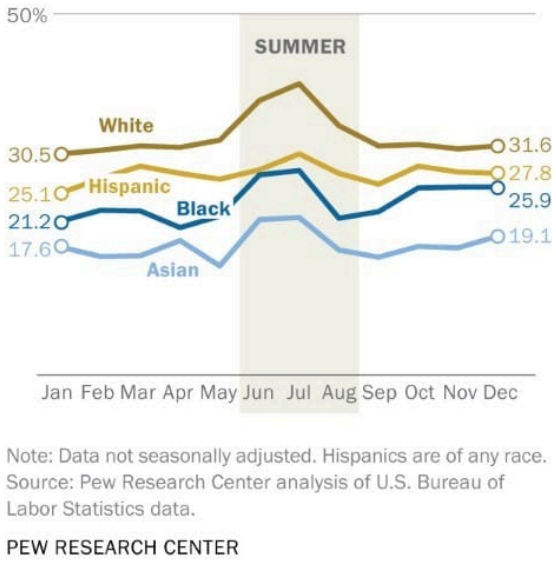


Figure 7.4.1. Percentage of U.S. 16- to 19-year-olds who are employed by month, 2018.

Teen employment rates have declined dramatically since 2000. Currently, only about a third of teens work. Since the late 1940s, the start of this data collection, through the 1980s, teen employment followed a predictable pattern—employment was up when the economy was good and fell when the economy was bad, but it typically remained between 46% and 58%. This trend changed following the recession of 1990-91 when teen employment did not recover as usual. Teen employment fell again during the 2001 recession, and even more during and after the 2007-09 recession. Teen employment bottomed out at about 30% in 2010, and while it has edged up slightly, it is still well below pre-recession levels. This trend is not purely American—similar declines in youth employment have been observed in other advanced economies (DeSilver, 2018).

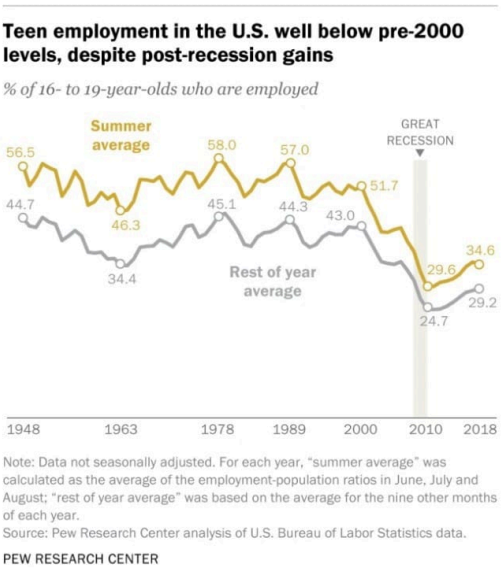


Figure 7.4.2. Percentage of 16- to 19-year-olds where are employed by year.

Research has examined reasons for the decline in teen employment rates since 2000 and has discovered multiple possibilities. There are fewer low-skill, entry-level jobs, such as sales clerks or office assistants, than in decades past. While most industries have seen losses in teen workers, food service is the one industry hiring more teens than in previous decades. Another reason may have to do with changes to the academic calendar. More schools are ending in late June and starting back in late August. A shortened summer break makes finding summer employment challenging. In addition, more students are taking classes over the summer, including getting a head start on college credits. More teens are also completing community service hours, often a requirement for graduation or a bolster to their college applications. Finally, more students are doing unpaid internships, which do not count toward employment statistics (DeSilver, 2018).

Why are Fewer Teens Working Summer Jobs?

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 7.4.1. Why are Fewer Teens Working Summer Jobs? is an interview with The Atlantic's Derek Thompson, author of "Teenagers Have Stopped Getting Summer Jobs—Why?" and discusses some of the reasons for the forward trend in teen employment.

Career Development

Work plays a significant role in the lives of people, and adolescence is a time when we begin to explore our career options and set a course for establishing a career. Career development has a number of stages:

Table 7.4.1. Stages of career development

#	STAGE	DESCRIPTION
1	GROWING	This is a time in the early years (4–13 years old) when you begin to have a sense of the future. You begin to realize that your participation in the world is related to being able to do certain tasks and accomplish certain goals.
2	EXPLORING	This period begins when you are a teenager, and it extends into your mid-twenties. In this stage, you find that you have specific interests and aptitudes. You are aware of your inclinations to perform and learn about some subjects more than others. You may try out jobs in your community or at your school. You may begin to explore a specific career. At this stage, you have some detailed "data points" about careers, which will guide you in certain directions.
3	ESTABLISHING	This period covers your mid-twenties through mid-forties. By now, you are selecting or entering a field you consider suitable, and you are exploring job opportunities that will be stable. You are also looking for upward growth, so you may be thinking about an advanced degree.
4	MAINTAINING	This stage is typical for people in their mid-forties to mid-sixties. You may be in an upward pattern of learning new skills and staying engaged. But you might also be merely "coasting and cruising" or even feeling stagnant. You may be taking stock of what you've accomplished and where you still want to go.
5	REINVENTING	In your mid-sixties, you are likely transitioning into retirement. But retirement in our technologically advanced world can be just the beginning of a new career or pursuit—a time when you can reinvent yourself. There are many new interests to pursue, including teaching others what you've learned, volunteering, starting online businesses, consulting, etc.

The American School Counselor Association (2017) recommends that school counselors aid students in their career development beginning as early as kindergarten and continue this development throughout their education.

One of the most well-known theories about career choice is from John Holland (1985), who proposed six categories of personality types based on career interests, as well as varying types of work environments. People with similar interests and personalities gravitate toward similar careers. The better matched one's personality is to the workplace characteristics, the more satisfied and successful one is predicted to be with that career or vocational choice. Research support has been mixed, and we should note that there is more to satisfaction and success in a career than one's personality traits or likes and dislikes. For instance, education, training, and abilities need to match the expectations and demands of the job, plus the state of the economy, availability of positions, and salary rates may play practical roles in choices about work.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 7.4.2. Holland's Personality Types explained.

The six personality types are:

- **Realistic.** These people describe themselves as honest, loyal, and practical. They are doers more than thinkers. They may have strong mechanical, motor, and athletic abilities; like the outdoors; and prefer working with machines, tools, plants, and animals.
- **Investigative.** These people love problem-solving and analytical skills. They are intellectually stimulated and often mathematically or scientifically inclined; like to observe, learn, and evaluate; prefer working alone; might be described as reserved.
- **Artistic.** These people are the "free spirits." They are creative, emotional, intuitive, and idealistic; have a flair for communicating ideas; dislike structure, and prefer working independently; like to sing, write, act, paint, and think creatively. They are similar to the investigative type but are interested in the artistic and aesthetic aspects of things more than the

scientific.

- **Social.** These are “people” people. They are friendly and outgoing; love to help others, make a difference, or both; have strong verbal and personal skills and teaching abilities.
- **Enterprising.**These people are confident, assertive risk-takers. They are sociable; enjoy speaking and leadership; like to persuade rather than guide; like to use their influence; have strong interpersonal skills; are status-conscious.
- **Conventional.** These people are dependable, detail-oriented, disciplined, precise, persistent, and practical; value order; and are good at clerical and numerical tasks. They work well with people and data, so they are good organizers, schedulers, and project managers.

Table 7.4.2. Holland’s occupational options

Type	Ideal Environments	Career Options
Realistic	• Structured • Clear lines of authority • Work with things and tools • Motivated to use hands-on skills to produce tangible results	• Contractor • Emergency medical technician (EMT) • Mechanic • Military career • Packaging engineer
Investigative	• Nonstructured • Research-oriented • Intellectual • Work with ideas and data • Motivated to probe questions of intellectual curiosity	• Pharmacist • Lab technician • Nanotechnologist • Geologist • College professor
Artistic	• Non-structured, creative • Rewards unconventional and aesthetic approaches • Creation of products and ideas • Motivated to express themselves through their work	• Advertising career • Architect • Animator • Musician • Journalist
Social	• Collaborative, collegial • Work with people and on people-related problems/issues • Work as a team or community • Motivated to help and empower others	• Teacher • Counselor • Correctional officer • Coach • Nurse
Enterprising	• Typical business environment • Results-oriented, driven • Work with people and data • Entrepreneurial • Motivated to persuade others on the merits of an idea or product	• Sales manager • Banker • Lawyer • Business owner • Restaurant manager

Type	Ideal Environments	Career Options
Conventional	• Orderly • Clear rules and policies • Consistent processes • Work with systems to manipulate and organize data • Motivated to organize information and bring order to data and things	• Auditor • Insurance underwriter • Bank teller • Office manager • Database manager

Link to Learning: What'S Your Right Career?

To complete a free online career questionnaire and identify potential careers based on your preferences, go to: Career One Stop Questionnaire

Career Trends

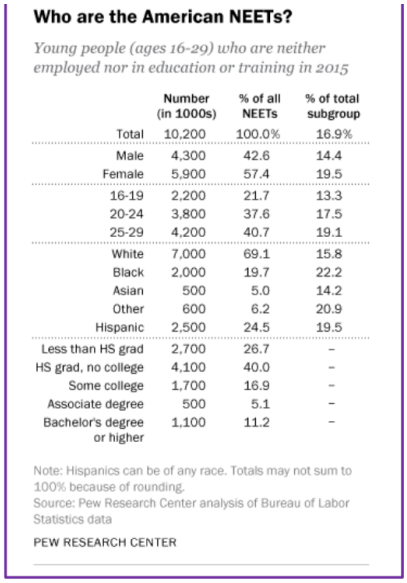
In recent years, young adults are more likely to find themselves job-hopping and periodically returning to school for further education and retraining than in prior generations. However, researchers find that occupational interests remain fairly stable. Thus, despite the more frequent change in jobs, most people are generally seeking jobs with similar interests rather than entirely new careers (Rottinghaus, Coon, Gaffey & Zytowski, 2007).

Recent research also suggests that Millennials are looking for something different in their place of employment. According to a recent Gallup poll report (2016), Millennials want more than a paycheck; they want a purpose. Unfortunately, only 29% of Millennials surveyed by Gallup reported that they were "engaged" at work. In fact, they report being less engaged than Gen Xers and Baby Boomers, with 55% of Millennials saying they are not engaged at all with their job. This indifference to their workplace may explain the greater tendency to switch jobs. With their current job giving them little reason to stay, they are more likely to take any new opportunity to move on. Only half of Millennials saw themselves working at the same company a year later. Gallup estimates that this employment turnover and lack of engagement costs businesses $30.5 billion a year.

Neet: Neither Employed nor in Education or Training

Since teens and young adults were some of the hardest hit by the economic downturn in recent years (DeSilver, 2016), a number of young people have become **NEET**s, neither employed nor in education or training. While the number of young people who are NEETs has declined, there is concern that "without assistance, economically inactive young people won't gain critical job skills and will never fully integrate into the wider economy or achieve their full earning potential" (DeSilver, 2016, para. 3). In Europe, where the rates of NEETs are persistently high, there is also concern that having such large numbers of young adults with little opportunity may increase the chances of social unrest.

In the United States, in 2015, nearly 17% of 16 to 29 year-olds were neither employed nor in school, according to data Desilver (2016) obtained from the Bureau of Labor Statistics. This is down slightly from 2013 when approximately 18.5% of this age group fit the category. As noted in Table 7.2, more women than men find themselves unemployed and not in school. Additionally, most NEETs have high school or less education, and Asians are less likely to be NEETs than any other ethnic group.



Who are the American NEETs?

Young people (ages 16-29) who are neither employed nor in education or training in 2015

	Number (in 1000s)	% of all NEETs	% of total subgroup
Total	10,200	100.0%	16.9%
Male	4,300	42.6	14.4
Female	5,900	57.4	19.5
16-19	2,200	21.7	13.3
20-24	3,800	37.6	17.5
25-29	4,200	40.7	19.1
White	7,000	69.1	15.8
Black	2,000	19.7	22.2
Asian	500	5.0	14.2
Other	600	6.2	20.9
Hispanic	2,500	24.5	19.5
Less than HS grad	2,700	26.7	–
HS grad, no college	4,100	40.0	–
Some college	1,700	16.9	–
Associate degree	500	5.1	–
Bachelor's degree or higher	1,100	11.2	–

Note: Hispanics can be of any race. Totals may not sum to 100% because of rounding.
Source: Pew Research Center analysis of Bureau of Labor Statistics data

PEW RESEARCH CENTER

Figure 7.4.3. The American NEETs: young people (ages 16-19) who are neither employed nor in education or training in 2015.

Gender Differences in Careers

Gender also has an impact on career choices. Despite the rise in the number of women who work outside of the home, there are some career fields that are still pursued more by men than women. Jobs held by women still tend to cluster in the service sector, such as education, nursing, and child-care worker. While in more technical and scientific careers, women are greatly outnumbered by men. Jobs that have been traditionally held by women tend to have lower status, pay, benefits, and job security (Ceci & Williams, 2007).

In recent years, women have made inroads into fields once dominated by males, and today women are almost as likely as men to become medical doctors or lawyers. Despite these changes, women are more likely to have lower-status, and thus less pay than men in these professions. For instance, women are more likely to be a family practice doctor than a surgeon or are less likely to make partner in a law firm (Ceci & Williams, 2007).

Candela Citations

CC licensed content, Original

- Work and Career. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...rk-and-career/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Career Development. **Authored by**: Linda Bruce. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/lu...development-2/. **License**: CC BY: Attribution
- Career Exploration. **Provided by**: Monroe Community College. **Retrieved from**: https://courses.lumenlearning.com/co...r-exploration/. **License**: Public Domain: No Known Copyright

All rights reserved content

- Why are Fewer Teens Working Summer Jobs? . **Provided by**: CBS This Morning. **Retrieved from**: https://youtu.be/x0mNAQtN8oE. **License**: All Rights Reserved
- Holland's Personality Types. **Authored by**: Karlee Alexandra. **Retrieved from**: https://youtu.be/NI9tVEKXQdQ. **License**: Public Domain: No Known Copyright

This page titled 7.4: Work and Career is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

attention deficit hyperactivity disorder: a neurological and behavioral disorder in which a person has difficulty staying on task, screening out distractions, and inhibiting behavioral outbursts

autism or autism spectrum disorder: a developmental disorder that affects communication and behavior

dyslexia: a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities

ecological systems model: Brofenbrenner's theory that we all belong to many communities and are influenced in the context of multiple environments, also known as ecological systems; organized into five levels of external influence: microsystem, mesosystem, exosystem, macrosystem and chronosystem

hidden curriculum: cultural values, concepts, behaviors and roles that are part of the school experience but are not part of the formal curriculum

home state: occurs when parents or siblings visit the school. Children in this state may enjoy special privileges such as going home early or being exempt from certain school rules in the mother's presence, or it can be difficult if the parent is there to discuss trouble at school with a staff member

middle school: a school for children in the grades between elementary school and high school. Middle school usually begins with grade 6 and ends with grade 8

sanctity state: a time in which the child is contemplative, quiet, or prayerful. It is often only a very brief part of the day

secondary education: the period after primary education (elementary or grade school) and before tertiary education (college). It usually occurs from about ages 12 to 18, although there is some variation by school and by nation

street corner state: state in which the child is playful, energetic, excited, and expresses personal opinions, feelings, and beliefs

student state: this state is one in which the student focuses on a task or tries to stay focused on a task, is passive, compliant, and often frustrated

This page titled 7.5: Glossary is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

8: IDENTITY DEVELOPMENT

Learning Objectives

- Define self-concept
- Describe self-esteem and differentiate the different self-esteem types
- Explain Erikson's stages of psychosocial development as it applies to adolescence
- Explain Marcia's four identity statuses
- Identify major domains of identity formation and the developmental processes for each

Adolescence is a period of personal and social identity formation, in which different roles, behaviors, and ideologies are explored. In the United States, adolescence is seen as a time to develop independence from parents while remaining connected to them. Some key points related to social development during adolescence include the following:

- Adolescence is the period of life known for the formation of personal and social identity.
- Adolescents must explore, test limits, become autonomous, and commit to an identity or sense of self.
- Erik Erikson referred to the task of the adolescent as one of identity versus role confusion. Thus, in Erikson's view, an adolescent's central questions are "Who am I?" and "Who do I want to be?"
- Early in adolescence, cognitive developments result in greater self-awareness, the ability to think about abstract, future possibilities, and the ability to consider multiple possibilities and identities at once.
- Changes in the levels of certain neurotransmitters (such as dopamine and serotonin) influence how adolescents experience emotions, typically making them more emotional and more sensitive to stress.
- When adolescents have advanced cognitive development and maturity, they tend to resolve identity issues more efficiently than peers who are less cognitively developed.
- As adolescents work to form their identities, they pull away from their parents, and peer groups become very important; despite this, relationships with parents still play a significant role in identity formation.

8.1: Identity Formation

8.2: Identity Development Theory

8.3: Domains of Identity

8.4: Glossary

This page titled 8: Identity Development is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

8.1: Identity Formation



Identity development is a stage in the adolescent life cycle. For most, the search for identity begins in the adolescent years. During these years, adolescents are more open to 'trying on' different behaviors and appearances to discover who they are. In an attempt to find their identity, adolescents are likely to cycle through several identities to find one that suits them best.

Developing and maintaining identity (in adolescent years) is difficult due to multiple factors such as family life, environment, and social status. Empirical studies suggest that this process might be more accurately described as identity development rather than formation, but confirm a normative process of change in both the content and structure of one's thoughts about the self.

Main aspects of identity development include self-concept, self-efficacy, and self-esteem.

Self-Concept

Self-concept is the idea of self-constructed from opinions and beliefs about one's self. These concepts are defined confidently, consistently, and with stability. Early in adolescence, cognitive developments result in greater self-awareness, greater awareness of others and their thoughts and judgments, the ability to think about abstract, future possibilities, and the ability to consider multiple possibilities at once. As a result, adolescents experience a significant shift from the simple, concrete, and global self-descriptions typical of young children; as children, they defined themselves by physical traits, whereas adolescents define themselves based on their values, thoughts, and opinions.

During adolescence, several factors contribute to the formation of self-concept, which is the individual's perception and evaluation of themselves. The first factor is personal experiences and achievements. Adolescents' perceptions of their abilities, skills, and accomplishments contribute to their sense of self-worth and self-efficacy. The second factor is that cultural and societal norms influence adolescents' self-concept by shaping their beliefs, values, and attitudes. The third factor is the influence of family and peers. Family members provide a secure base for adolescents to explore their sense of self, while peers offer social comparison and feedback. Understanding these factors and their interaction can help caregivers and educators better support adolescents as they navigate this critical period of identity development.

Cognitive Influences on Self-Concept

The development of self-awareness begins in early childhood. During adolescence, the development of self-concept continues and becomes more complex and abstract. The development of adolescents' cognitive functioning gives them the ability for abstract thinking, such as thinking of various possibilities and versions of themselves in different contexts. While self-description in childhood tends to be in concrete terms, "I have a cat named Socks," self-concept in adolescence becomes more trait-focused, "I am honest and talkative." Ask an adolescent girl to describe herself, she may say, "My friends see me as being outgoing and carefree, but I am actually really anxious and can be shy." Adolescents are able to make the distinction between how others perceive them and how they view themselves; they are able to describe themselves, taking both their own and others' views into account (Cole et al., 2001; Updegraff et al., 2004). Due to their increased awareness of themselves, adolescents are able to think about themselves in more comprehensive terms than they did during childhood – they can perceive multiple traits of themselves

simultaneously.

Adolescent identity is a complex and multifaceted concept that is characterized by a plethora of contradictory understandings of the self. During this developmental stage, young people are trying to make sense of their own identity, trying to figure out who they are and what their place is in the world. This process is often fraught with tension, as adolescents may hold conflicting beliefs, values, and desires that can be difficult to reconcile. For instance, they may feel a strong need to belong to a peer group while simultaneously wanting to assert their individuality. Additionally, they may struggle to reconcile the expectations and values of their family and community with their own emerging sense of self. These contradictions can lead to confusion and anxiety, but they are also a natural part of the process of identity formation, as adolescents navigate the complex terrain of growing up and figuring out who they are.

The increase in adolescents' cognitive functioning and abstract thinking also gives them the ability to think about an **actual self**, who they perceive themselves to be currently, and a **possible self**, who they perceive they can be potentially (Markus & Nurius, 1986; Oyserman Destin, & Novin, 2015). The possible self can be either positive or negative. The positive possible self is called an **ideal self**, and this is the person that the adolescent wishes to be, such as getting good grades, graduating, and being accepted to their college of choice. The negative possible self is called a **feared self**, and this is the person that the adolescent is afraid of becoming, such as a high school dropout. (Chalk et al., 2005). Having the cognitive ability to think of abstract possible selves can result in either a positive or a negative psychological impact, depending on the self-concept of the adolescent. If the adolescent's self-concept leads to the belief that there is too great a difference between their ideal self and their actual self, then this may result in hopelessness and depression. However, having an ideal self can be an incredible motivator for behavior that leads to that ideal self; in the example above, such behavior would be attending school, completing assignments, and being attentive and engaged in classes. Having both an ideal self and a feared self can be beneficial to adolescents as a motivator to behave in ways that help them reach the ideal self and prevent the feared self. Having these possible selves illustrates adolescents' growing cognitive abilities, which lead to a more abstract self-concept.

Further distinctions in self-concept, called **differentiation**, occur as the adolescent recognizes the contextual influences on their behavior and the perceptions of others, and begins to qualify their traits when asked to describe themselves. Differentiation appears fully developed by mid-adolescence. Peaking in the 7th-9th grades, the personality traits adolescents use to describe themselves refer to specific contexts and, therefore, may contradict one another. The recognition of inconsistent content in the self-concept is a common source of distress in these years, but this distress may benefit adolescents by encouraging structural development.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 8.2.1. Self-Concept, Self-Identity, and Social Identity explains the various types of self and the formation of identity.

Cooley's Looking-Glass Self

Charles Horton Cooley (1964) suggested that our self-concept comes from looking at how others respond to us. This process, known as the looking-glass self, involves looking at how others seem to view us and interpreting this as we make judgments about whether we are good or bad, strong or weak, beautiful or ugly, and so on. Of course, we do not always interpret their responses accurately so our self-concept is not simply a mirror reflection of the views of others. After forming an initial self-concept, we may use our existing self-concept as a mental filter, screening out those responses that do not seem to fit our ideas of who we are. So compliments may be negated, for example.

Think of times in your life when you felt more self-conscious. The process of the looking-glass self is pronounced when we are preschoolers. Later in life, we also experience this process when we are in a new school, new job, or taking on a new role in our personal lives and trying to gauge our own performance. When we feel more sure of who we are, we focus less on how we appear to others.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 8.2.2. Charles Cooley–Looking Glass Self explains more about this theory.

Mead's I and Me

George Herbert Mead (1967) explained how we develop a social sense of self by being able to see ourselves through the eyes of others. There are two parts of the self: the "I," which is spontaneous, creative, and innate and is not concerned with how others view us, and the "me," which is the social definition of who we are.

When we are born, we are all "I" and act without concern about how others view us. However, the socialized self begins when we are able to consider how one important person views us. This initial stage is called "taking the role of the significant other." For example, a child may pull a cat's tail and be told by his mother, "No! Don't do that, that's bad," while receiving a slight slap on the hand. Later, the child may mimic the same behavior toward the self and say aloud, "No, that's bad" while patting his own hand. What has happened? The child is able to see himself through the eyes of the mother. As the child grows and is exposed to many situations and rules of culture, he begins to view the self in the eyes of many others through these cultural norms or rules. This is referred to as "taking the role of the generalized other" and results in a sense of self with many dimensions. The child comes to have a sense of self as a student, as a friend, as a son, and so on.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 8.2.3. George Herbert Mead–The I and the Me explains more about this theory.

Cultural Influences on Self-Concept

Cultural beliefs and values play an important role in the development of self-concept in adolescence. The value that different cultures place on self-reflection and self-knowledge can greatly affect the development of self-concept. Cultures that value individualism and independence, which are referred to as individualistic cultures, can foster the development of a sense of self by emphasizing the value of self-reflection and personal accomplishment. Another type of culture, collectivistic cultures, place less value on individualism and more value on collectivism, which puts groups' needs over individuals' needs, such as the needs of the family or the community.

Culture can also influence an adolescent's self-concept by placing value on certain behaviors and characteristics over others; this can lead to a more positive or negative self-concept, depending on whether the adolescent's characteristics align with those valued by their culture. For example, in a culture like the United States, where independence, assertiveness, and being outgoing are highly valued characteristics, an adolescent who has those characteristics may have a more positive self-concept than an adolescent who is shy and reserved.

A sense of belonging and self-identity are important aspects of self-concept. Self-concept can also be influenced by culture if the adolescent is in a marginalized or excluded group, such as a Black adolescent or an adolescent with disabilities, in

a discriminating community. This can lead to feelings of isolation and being disconnected from the community, which can negatively impact self-concept.

Self-Efficacy

Imagine two students, Sally and Lucy, who are about to take the same math test. Sally and Lucy have the same exact ability to do well in math, the same level of intelligence, and the same motivation to do well on the test. They also studied together. They even have the same brand of shoes on. The only difference between the two is that Sally is very confident in her mathematical and test-taking abilities, while Lucy is not. So, who is likely to do better on the test? Sally, of course, because she has the confidence to use her mathematical and test-taking abilities to deal with challenging math problems and to accomplish goals that are important to her, in this case, doing well on the test. This difference between Sally and Lucy—the student who got the A and the student who got the B-, respectively—is self-efficacy. Self-efficacy influences behavior and emotions in particular ways that help people better manage challenges and achieve valued goals.

A concept introduced by Albert Bandura in 1977, **self-efficacy** refers to a person's belief that he or she can effectively perform the tasks needed to attain a valued goal (Bandura, 1977). Since then, self-efficacy has become one of the most thoroughly researched concepts in psychology. Just about every important domain of human behavior has been investigated using self-efficacy theory (Bandura, 1997; Maddux, 1995; Maddux & Gosselin, 2011, 2012). Self-efficacy does not refer to your abilities but rather to your beliefs about what you can do with your abilities. Also, self-efficacy is not a trait—there are not certain types of people with high self-efficacies and others with low self-efficacies (Stajkovic & Luthans, 1998). Rather, people have self-efficacy beliefs about specific goals and life domains. For example, if you believe that you have the skills necessary to do well in school and believe you can use those skills to excel, then you have high academic self-efficacy.

Self-efficacy may sound similar to a concept you may be familiar with already—*self-esteem*—but these are very different notions. Self-esteem refers to how much you like or "esteem" yourself, to what extent you believe you are a good and worthwhile person. Self-efficacy, however, refers to your self-confidence to perform well and to achieve in specific areas of life, such as school, work, and relationships. Self-efficacy does influence self-esteem because how you feel about yourself overall is greatly influenced by your confidence in your ability to perform well in areas that are important to you and to achieve valued goals. For example, if performing well in athletics is very important to you, then your self-efficacy for athletics will greatly influence your self-esteem; however, if performing well in athletics is not at all important to you, then your self-efficacy for athletics will probably have little impact on your self-esteem.

Self-efficacy begins to develop in very young children. Once self-efficacy is developed, it does not remain constant—it can change and grow as an individual has different experiences throughout his or her lifetime. When children are very young, their parents' self-efficacy is important (Jones & Prinz, 2005). Children of parents who have high parental self-efficacy perceive their parents as more responsive to their needs (Gondoli & Silverberg, 1997). Around the ages of 12 through 16, adolescents' friends also become an important source of self-efficacy beliefs. Adolescents who associate with peer groups that are not academically motivated tend to experience a decline in academic self-efficacy (Wentzel, Barry, & Caldwell, 2004). Adolescents who watch their peers succeed, however, experience a rise in academic self-efficacy (Schunk & Miller, 2002). As discussed above, this is an example of gaining self-efficacy through vicarious performances. The effects of self-efficacy that develop in adolescence are long-lasting. One study found that greater social and academic self-efficacy measured in people ages 14 to 18 predicted greater life satisfaction five years later (Vecchio, Gerbino, Pastorelli, Del Bove, & Caprara, 2007).

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 8.2.4. Self-Esteem, Self-Efficacy, and Locus of Control.

Major Influences on Self-Efficacy

Self-efficacy beliefs are influenced in five different ways (Bandura, 1997), which are summarized in the table below.

Table 8.2.1. Major Influences on Self-efficacy.

Influence	Definition
Performance Experiences	When you do well and succeed at a particular task to attain a valued goa, you usually believe that you will succeed again at this task. When you fail you often expect that you will fail again in the future if you try that task.
Vicarious Performances	If someone who seems similar to you succeeds, then you may come to believe that you will succeed as well.
Verbal Persuasion	This involves people telling you what they believe you are and are not capable of doing. Not all people will be equally persuasive.
Imaginal Performances	What you imagine yourself doing and how well or poorly you imagine yourself doing it.
Affective States & Physical Sensations	When you associate negative moods and negative physical sensations with failure, and positive physical sensations with success.

These five types of self-efficacy influence can take many real-world forms that almost everyone has experienced. You may have had previous performance experiences that affected your academic self-efficacy when you did well on a test and believed that you would do well on the next test. A vicarious performance may have affected your athletic self-efficacy when you saw your best friend skateboard for the first time and thought that you could skateboard well, too. Verbal persuasion could have affected your academic self-efficacy when a teacher that you respect told you that you could get into the college of your choice if you studied hard for the SATs. It's important to know that not all people are equally likely to influence your self-efficacy through verbal persuasion. People who appear trustworthy or attractive, or who seem to be experts, are more likely to influence your self-efficacy than are people who do not possess these qualities (Petty & Brinol, 2010). That's why a teacher you respect is more likely to influence your self-efficacy than a teacher you do not respect. Imaginal performances are an effective way to increase your self-efficacy. For example, imagining yourself doing well on a job interview actually leads to more effective interviewing (Knudstrup, Segrest, & Hurley, 2003). Affective states and physical sensations abound when you think about the times you have given presentations in class. For example, you may have felt your heart racing while giving a presentation. If you believe your heart was racing because you had just had a lot of caffeine, it likely would not affect your performance. If you believe your heart was racing because you were doing a poor job, you might believe that you cannot give the presentation well. This is because you associate the feeling of anxiety with failure and expect to fail when you are feeling anxious.

Benefits of High Self-Efficacy

Academic Performance

Consider academic self-efficacy in your own life and recall the earlier example of Sally and Lucy. Are you more like Sally, who has high academic self-efficacy and believes that she can use her abilities to do well in school, or are you more like Lucy, who does not believe that she can effectively use her academic abilities to excel in school? Do you think your own self-efficacy has ever affected your academic ability? Do you think you have ever studied more or less intensely because you did or did not believe in your abilities to do well? Many researchers have considered how self-efficacy works in academic settings, and the short answer is that academic self-efficacy affects every possible area of academic achievement (Pajares, 1996).

Students who believe in their ability to do well academically tend to be more motivated in school (Schunk, 1991). When self-efficacious students attain their goals, they continue to set even more challenging goals (Schunk, 1990). This can all lead to better performance in school in terms of higher grades and taking more challenging classes (Multon, Brown, & Lent, 1991). For example, students with high academic self-efficacy might study harder because they believe that they are able to use their abilities to study effectively. Because they studied hard, they received an A on their next test. Teachers' self-efficacy can also affect how well a student performs in school. Self-efficacious teachers encourage parents to take a more active role in their children's learning, leading to better academic performance (Hoover-Dempsey, Bassler, & Brissie, 1987).

Although there is a lot of research about how self-efficacy is beneficial to school-aged children, college students can also benefit from self-efficacy. Freshmen with higher self-efficacies about their ability to do well in college tend to adapt to their first year in college better than those with lower self-efficacies (Chemers, Hu, & Garcia, 2001). The benefits of self-efficacy continue beyond the school years: people with strong self-efficacy beliefs toward performing well in school tend to perceive a wider range of career options (Lent, Brown, & Larkin, 1986). In addition, people who have stronger beliefs of self-efficacy toward their professional work tend to have more successful careers (Stajkovic & Luthans, 1998).

One question you might have about self-efficacy and academic performance is how a student's actual academic ability interacts with self-efficacy to influence academic performance. The answer is that a student's actual ability does play a role, but it is also influenced by self-efficacy. Students with greater ability perform better than those with lesser ability. But among a group of students with the same exact level of academic ability, those with stronger academic self-efficacy outperform those with weaker self-efficacy. One study (Collins, 1984) compared performance on difficult math problems among groups of students with different levels of math ability and different levels of math self-efficacy. Among a group of students with average levels of math ability, the students with weak math self-efficacy got about 25% of the math problems correct. The students with average levels of math ability and strong math self-efficacy got about 45% of the questions correct. This means that by just having stronger math self-efficacy, a student of average math ability will perform 20% better than a student with similar math ability but weaker math self-efficacy. You might also wonder if self-efficacy makes a difference only for people with average or below-average abilities. Self-efficacy is important even for above-average students. In this study, those with above-average math abilities and low math self-efficacies answered only about 65% of the questions correctly; those with above-average math abilities and high math self-efficacies answered about 75% of the questions correctly.

Healthy Behaviors

Think about a time when you tried to improve your health, whether through dieting, exercising, sleeping more, or any other way. Would you be more likely to follow through on these plans if you believed that you could effectively use your skills to accomplish your health goals? Many researchers agree that people with stronger self-efficacies for doing healthy things (e.g., exercise self-efficacy, dieting self-efficacy) engage in more behaviors that prevent health problems and improve overall health (Strecher, DeVellis, Becker, & Rosenstock, 1986). People who have strong self-efficacy beliefs about quitting smoking are able to quit smoking more easily (DiClemente, Prochaska, & Gibertini, 1985). People who have strong self-efficacy beliefs about being able to reduce their alcohol consumption are more successful when treated for drinking problems (Maisto, Connors, & Zywiak, 2000). People who have stronger self-efficacy beliefs about their ability to recover from heart attacks do so more quickly than those who do not have such beliefs (Ewart, Taylor, Reese, & DeBusk, 1983).

One group of researchers (Roach Yadrick, Johnson, Boudreaux, Forsythe, & Billon, 2003) conducted an experiment with people trying to lose weight. All people in the study participated in a weight loss program that was designed for the U.S. Air Force. This program had already been found to be very effective, but the researchers wanted to know if increasing people's self-efficacy could make the program even more effective. So, they divided the participants into two groups: one group received an intervention that was designed to increase weight loss self-efficacy along with the diet program, and the other group received only the diet program. The researchers tried several different ways to increase self-efficacy, such as having participants read a copy of *Oh, The Places You'll Go!* by Dr. Seuss (1990) and having them talk to someone who had successfully lost weight. The people who received the diet program and an intervention to increase self-efficacy lost an average of 8.2 pounds over the 12 weeks of the study; those participants who had only the diet program lost only 5.8 pounds. Thus, just by increasing weight loss self-efficacy, participants were able to lose over 50% more weight.

Studies have found that increasing a person's nutritional self-efficacy can lead them to eat more fruits and vegetables (Luszczynska, Tryburcy, & Schwarzer, 2006). Self-efficacy plays a large role in successful physical exercise (Maddux & Dawson, 2014). People with stronger self-efficacies for exercising are more likely to plan on beginning an exercise program, actually begin that program (DuCharme & Brawley, 1995), and continue it (Marcus, Selby, Niaura, & Rossi, 1992). Self-efficacy is especially important when it comes to safe sex. People with greater self-efficacy about condom usage are more likely to engage in safe sex (Kaneko, 2007), making them more likely to avoid sexually transmitted diseases, such as HIV (Forsyth & Carey, 1998).

Athletic Performance

If you are an athlete, self-efficacy is especially important in your life. Professional and amateur athletes with stronger self-efficacy beliefs about their athletic abilities perform better than athletes with weaker levels of self-efficacy (Wurtele, 1986). This holds true for athletes in all types of sports, including track and field (Gernigon & Delloye, 2003), tennis (Sheldon & Eccles, 2005), and golf (Bruton, Mellalieu, Shearer, Roderique-Davies, & Hall, 2013). One group of researchers found that basketball players with strong

athletic self-efficacy beliefs hit more foul shots than did basketball players with weak self-efficacy beliefs (Haney & Long, 1995). These researchers also found that the players who hit more foul shots had greater increases in self-efficacy after they hit the foul shots, compared to those who hit fewer foul shots and did not experience increases in self-efficacy. This is an example of how we gain self-efficacy through performance experiences.

Self-Regulation

One of the major reasons that higher self-efficacy usually leads to better performance and greater success is that self-efficacy is an important component of self-regulation. Self-regulation is the complex process through which you control your thoughts, emotions, and actions (Gross, 1998). It is crucial to success and well-being in almost every area of your life. Every day, you are exposed to situations where you might want to act or feel a certain way that would be socially inappropriate or that might be unhealthy for you in the long run. For example, when sitting in a boring class, you might want to take out your phone and text your friends, take off your shoes and take a nap, or perhaps scream because you are so bored. Self-regulation is the process that you use to avoid such behaviors and instead sit quietly through class. Self-regulation takes a lot of effort, and it is often compared to a muscle that can be exhausted (Baumeister, Bratslavsky, Muraven, & Tice, 1998). For example, a child might be able to resist eating a pile of delicious cookies if he or she is in the room with the cookies for only a few minutes, but if that child were forced to spend hours with the cookies, his or her ability to regulate the desire to eat the cookies would wear down. Eventually, his or her self-regulatory abilities would be exhausted, and the child would eat the cookies. A person with strong self-efficacy beliefs might become less distressed in the face of failure than might someone with weak self-efficacy. Because self-efficacious people are less likely to become distressed, they draw less on their self-regulation reserves; thus, self-efficacious people persist longer in the face of a challenge.

Self-efficacy influences self-regulation in many ways to produce better performance and greater success (Maddux & Volkmann, 2010). First, people with stronger self-efficacy have greater *motivation to perform* in the area for which they have stronger self-efficacy (Bandura & Locke, 2003). This means that people are motivated to work harder in those areas where they believe they can effectively perform. Second, people with stronger self-efficacy are more likely to *persevere through challenges* in attaining goals (Vancouver, More, & Yoder, 2008). For example, people with high academic self-efficacy are better able to motivate themselves to persevere through such challenges as taking a difficult class and completing their degrees because they believe that their efforts will pay off. Third, self-efficacious people believe that *they have more control over a situation*. Having more control over a situation means that self-efficacious people might be more likely to engage in the behaviors that will allow them to achieve their desired goal. Finally, self-efficacious people *have more confidence* in their problem-solving abilities and, thus, are able to better use their cognitive resources and make better decisions, especially in the face of challenges and setbacks (Cervone, Jiwani, & Wood, 1991).

Self-regulation is the capacity to alter one's responses. It is broadly related to the term "self-control". The term "regulate" means to change something, but not just any change, rather change to bring it into agreement with some idea, such as a rule, a goal, a plan, or a moral principle. To illustrate, when the government regulates how houses are built, that means the government inspects the buildings to check that everything is done "up to code" or according to the rules about good building. In a similar fashion, when you regulate yourself, you watch and change yourself to bring your responses into line with some ideas about how they should be.

People regulate four broad categories of responses. They control their thinking, such as trying to concentrate or shut some annoying earworm tune out of their mind. They control their emotions, as in trying to cheer themselves up or to calm down when angry (or to stay angry, if that's helpful). They control their impulses, such as trying not to eat fattening food, trying to hold their tongue, or trying to quit smoking. Last, they try to control their task performances, such as in pushing themselves to keep working when tired and discouraged, or deciding whether to speed up (to get more done) or slow down (to make sure to get it right).

Benefits of Self-Control

People who are good at self-regulation do better than others in life. Follow-up studies with Mischel's samples found that the children who resisted temptation and delayed gratification effectively grew into adults who were better than others in school and work, more popular with other people, and who were rated as nicer, better people by teachers and others (Mischel, Shoda, & Peake, 1988; Shoda, Mischel, & Peake, 1990). College students with high self-control get better grades, have better close relationships, manage their emotions better, have fewer problems with drugs and alcohol, are less prone to eating disorders, are better adjusted, have higher self-esteem, and get along better with other people, as compared to people with low self-control (Tangney, Baumeister, & Boone, 2004). They are happier and have less stress and conflict (Hofmann, Vohs, Fisher, Luhmann, & Baumeister, 2013). Longitudinal studies have found that children with good self-control go through life with fewer problems,

are more successful, are less likely to be arrested or have a child out of wedlock, and enjoy other benefits (Moffitt et al., 2011). Criminologists have concluded that low self-control is a—if not the—key trait for understanding the criminal personality (Gottfredson & Hirschi, 1990; Pratt & Cullen, 2000).

Some researchers have searched for evidence that too much self-control can be bad (Tangney et al., 2004)—but without success. There is such a thing as being highly inhibited or clinically "over-controlled," which can impair initiative and reduce happiness, but that does not appear to be an excess of self-regulation. Rather, it may stem from having been punished excessively as a child and, therefore, adopting a fearful, inhibited approach to life. In general, self-control resembles intelligence in that the more one has, the better off one is, and the benefits are found through a broad range of life activities.

Three Ingredients of Effective Self-Regulation

For self-regulation to be effective, three parts or ingredients are involved. The first is standards, which are ideas about how things should (or should not) be. The second is monitoring, which means keeping track of the target behavior that is to be regulated. The third is the capacity to change.

Standards are an indispensable foundation for self-regulation. We have already seen that self-regulation means a change in relation to some idea; without such guiding ideas, the change would largely be random and lack direction. Standards include goals, laws, moral principles, personal rules, other people's expectations, and social norms. Dieters, for example, typically have a goal in terms of how much weight they wish to lose. They help their self-regulation further by developing standards for how much or how little they eat and what kinds of foods they will eat.

The second ingredient is monitoring. It is hard to regulate something without being aware of it. For example, dieters count their calories. That is, they keep track of how much they eat and how fattening it is. In fact, some evidence suggests that dieters stop keeping track of how much they eat when they break their diet or go on an eating binge, and the failure of monitoring contributes to eating more (Polivy, 1976). Alcohol has been found to impair all sorts of self-regulation, partly because intoxicated persons fail to keep track of their behavior and compare it to their standards.

The combination of standards and monitoring was featured in an influential theory about self-regulation by Carver and Scheier (1981, 1982, 1998). Those researchers started their careers studying self-awareness, which is a key human trait. The study of self-awareness recognized early on that people do not simply notice themselves the way they might notice a tree or a car. Rather, self-awareness always seemed to involve comparing oneself to a standard. For example, when a man looks in a mirror, he does not just think, "Oh, there I am," but more likely thinks, "Is my hair a mess? Do my clothes look good?" Carver and Scheier proposed that the reason for this comparison to standards is that it enables people to regulate themselves, such as by changing things that do not measure up to their standards. In the mirror example, the man might comb his hair to bring it into line with his standards for personal appearance. Good students keep track of their grades, credits, and progress toward their degree and other goals. Athletes keep track of their times, scores, and achievements as a way to monitor improvement.

The process of monitoring oneself can be compared to how a thermostat operates. The thermostat checks the temperature in the room and compares it to a standard (the setting for the desired temperature), and if those do not match, it turns on the heat or air conditioner to change the temperature. It checks again and again, and when the room temperature matches the desired setting, the thermostat turns off the climate control. In the same way, people compare themselves to their personal standards, make changes as needed, and stop working on change once they have met their goals. People feel good not just when they reach their goals but even when they deem they are making good progress (Carver & Scheier, 1990). They feel bad when they are not making sufficient progress.

That brings up the third ingredient, which is the capacity to change oneself. In effective self-regulation, people operate on themselves to bring about these changes. The popular term for this is "willpower," which suggests some kind of energy is expended in the process. Psychologists hesitate to adopt terms associated with folk wisdom because there are many potential implications. Here, the term is used to refer specifically to some energy that is involved in the capacity to change oneself.

Consistent with the popular notion of willpower, people do seem to expend some energy during self-regulation. Many studies have found that after people exert self-regulation to change some response, they perform worse on the next unrelated task if it too requires self-regulation (Hagger, Wood, Stiff, & Chatzisarantis, 2010). That pattern suggests that some energy, such as willpower, was used up during the first task, leaving less available for the second task. The term for this state of reduced energy available for self-regulation is ego depletion (Baumeister, Bratslavsky, Muraven, & Tice, 1998). Current research provides mixed results on ego depletion, and we need further study to better understand when and how it occurs. It may be that as people go about their daily lives, they gradually become ego-depleted because they are exerting self-control and resisting temptations. Some research

suggests that during the state of ego depletion, people become less helpful and more aggressive, prone to overeat, misbehave sexually, and express more prejudice (Hofmann, Vohs, & Baumeister, 2012).

Thus, a person's capacity for self-regulation is not constant, but rather it fluctuates. To be sure, some people are generally better than others at controlling themselves (Tangney et al., 2004). However, even someone with excellent self-control may occasionally find that control breaks down due to ego depletion. In general, self-regulation can be improved by getting enough sleep and healthy food, and by minimizing other demands on one's willpower.

There is some evidence that regular exercise of self-control can build up one's willpower, like strengthening a muscle (Baumeister & Tierney, 2011; Oaten & Cheng, 2006). Even in early adulthood, one's self-control can be strengthened. Furthermore, research has shown that disadvantaged, minority children who take part in preschool programs such as Head Start (often based on the Perry program) end up doing better in life even as adults. This was thought for a while to be due to increases in intelligence quotient (IQ), but changes in IQ from such programs are at best temporary. Instead, recent work indicates that improvement in self-control and related traits may be what produces the benefits (Heckman, Pinto, & Savelyev, in press). It's not doing math problems or learning to spell at age 3 that increases subsequent adult success, but rather the benefit comes from having some early practice at planning, getting organized, and following rules.

Self-Esteem

Another aspect of identity formation is self-esteem. **Self-esteem** is defined as one's thoughts and feelings about one's self-concept and identity. Most theories on self-esteem state that there is a grand desire, across all genders and ages, to maintain, protect, and enhance their self-esteem. Contrary to popular belief, there is no empirical evidence for a significant drop in self-esteem throughout adolescence. "Barometric self-esteem" fluctuates rapidly and can cause severe distress and anxiety, but baseline self-esteem remains highly stable across adolescence. The validity of global self-esteem scales has been questioned, and many suggest that more specific scales might reveal more about the adolescent experience.

There are several self-concepts and situational factors that tend to impact an adolescent's self-esteem. Teens who are close to their parents and whose parents are authoritative tend to have higher self-esteem. Further, when adolescents are recognized for their successes, have set high vocational aspirations, are athletic, or feel attractive, they have higher self-esteem. Teens tend to have lower self-esteem when entering middle school, feel peer rejection, and experience academic failure. Also, adolescents who have authoritarian or permissive parents, need to relocate, or have low socioeconomic status, are more likely to experience lower self-esteem.

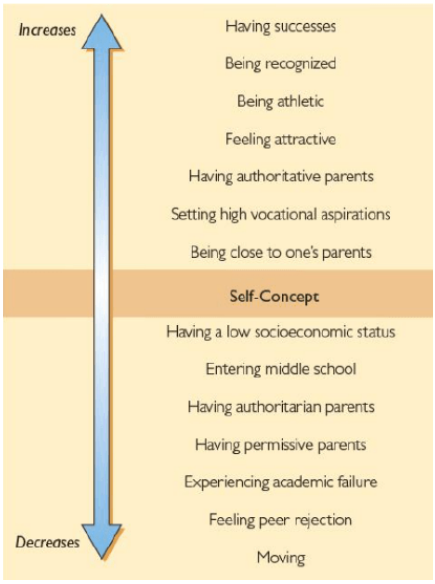


Figure 8.2.2. Factors that affect self-esteem in adolescents.

Girls are most likely to enjoy high self-esteem when engaged in supportive relationships with friends; the most important function of friendship to them is having someone who can provide social and moral support. When they fail to win friends' approval or cannot find someone with whom to share common activities and interests, in these cases, girls suffer from low self-esteem.

In contrast, boys are more concerned with establishing and asserting their independence and defining their relation to authority. As such, they are more likely to derive high self-esteem from their ability to influence their friends. On the other hand, the lack of romantic competence, for example, failure to win or maintain the affection of a romantic interest, is the major contributor to low self-esteem in adolescent boys.

Self-Esteem Types

According to Mruk (2003), self-esteem is based on two factors: competence and worthiness. The relationship between competence and worthiness defines one's self-esteem type. As these factors are a spectrum, we can even further differentiate self-esteem types and potential issues associated with each (Figure 8.2.3).

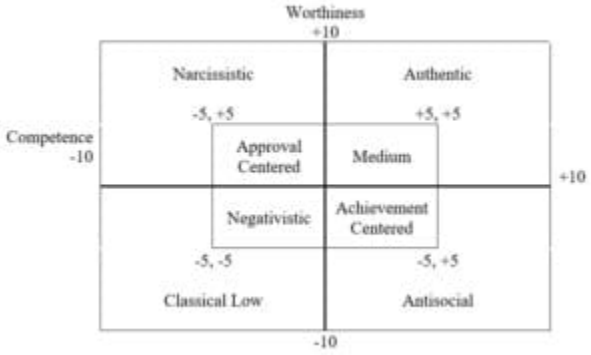


Figure 8.2.3. Self-Esteem meaning matrix with basic types and levels. Adapted from Mruk, 2003.

Those with high levels of competence and those who feel highly worthy will have high self-esteem. This self-esteem type tends to be stable and characterized by openness to new experiences and a tendency towards optimism. Those at the medium-high self-esteem type feel adequately competent and worthy. At the authentic level, individuals are realistic about their competence and feel worthy. They will actively pursue a life of positive, intrinsic values.

Individuals with low levels of competence and worthiness will have low self-esteem. At the negativistic level, people tend to be cautious and protective of what little self-esteem they do possess. Those at the classic low self-esteem level experience impaired function due to their low feelings of competence and worth, and are at risk for depression and giving up.

It is also possible to have high levels of competence but feel unworthy. This combination is a defensive or fragile self-esteem type, called competence-based self-esteem, where the person tends to compensate for their low levels of worthiness by focusing on their competence. At the success-seeking level, these individuals' self-esteem is contingent on their achievements, and they are often anxious about failure. The Antisocial level includes an exaggerated need for success and power, even to the point of acting out aggressively to achieve it.

Worthiness-based self-esteem is the combination of low competence and high worthiness. This type is another defensive or fragile self-esteem in which the individual has a low level of competence and compensates by focusing instead on their worthiness. At the approval-seeking level, these individuals are sensitive to criticism and rejection and base their self-esteem on the approval of others. At the narcissistic level, people will have an exaggerated sense of self-worth regardless of a lack of competencies. They also tend to be highly reactive to criticism and are very defensive.

Influences on Self-Esteem

Adolescence is a crucial time in the development of self-esteem. Many factors influence an adolescent's self-esteem.

Family Influences on Self-Esteem

One of the most important factors that influences an adolescent's self-esteem is family. Whether or not an adolescent feels supported and loved in their family can impact their self-worth. Family relationships that impact self-esteem include not only parents but also siblings. If an adolescent has a loving family environment and feels a sense of emotional security, support, and belonging, this will most likely lead to higher self-esteem than an adolescent who does not. Being in a family environment that

lacks a sense of security due to constant conflict and criticism, either between parents or siblings, may lead to lower self-esteem. Parents having unrealistic, high expectations can also lead to feelings of inadequacy and lower self-esteem.

Peer Influences on Self-Esteem

Being accepted and fitting in social groups is a critical element in adolescent socio-emotional development, and peers become an increasingly significant influence on self-esteem. Positive peer influences, such as having close friends who they feel connected to and who provide emotional support and encouragement, can make a positive impact on adolescents' self-worth, leading to higher self-esteem, while not having this social support can lead to feelings of isolation and lower self-esteem.

Cognitive Influences on Self-Esteem

In addition to family and peer influences, cognitive factors, such as how adolescents perceive themselves and how they interpret incidents, can also influence self-esteem. If adolescents perceive themselves as being capable, of being liked, and of comparing well in terms of their peer group, then their self-esteem is likely to be higher than that of adolescents who do not see themselves as being liked or capable, or believe that they are inferior to their peers. There are also **cognitive distortions** that lead to lower self-esteem, these cognitive distortions are patterns of inaccurate negative thinking, such as personalization (taking things personally when they are in fact not connected to you at all), overgeneralization (generalizing about the outcome of one event to all future events – thinking that if you did poorly on one math quiz then you will keep doing poorly and fail math class), and catastrophizing (assuming the worst will happen). Cognitive distortions like these lead to negative self-talk and lower self-esteem (Shirk, Burwell & Harter, 2003).

Cultural Influences on Self-Esteem

Cultural beliefs and values can influence self-esteem by affecting how people in that culture perceive their worth. Two particularly important cultural beliefs that can influence the self-esteem of adolescents are values of appearance and gender roles. For example, if a culture values males who are tall and have a muscular appearance, then a male adolescent who does not fit this ideal standard may experience lower self-esteem. The same concept applies to cultural values of gender roles. If a culture values females who are outgoing and confident, this ideal may negatively affect the self-esteem of a reserved and timid female adolescent due to not fitting in with the cultural ideal. Research studies have found that adolescent females tend to have lower self-esteem than adolescent males (Baumeister, 1993; Pipher, 1994). Cultural values and beliefs are thought to be one of the contributing factors to this phenomenon –in Western countries, the cultural emphasis on physical attractiveness for females contributes to lower self-esteem in those who do not feel like they fit the cultural standards.

Studies have found that different cultures share four key factors that contribute to adolescents' self-esteem: controlling one's life, doing one's duty, benefiting others, and achieving social status (Becker et al., 2014). However, the value that is placed individually on these four factors differs by culture. For example, in Western European cultures that value individual freedom, having control over one's life was the factor that was most associated with high self-esteem. In cultures that value tradition and conformity, such as some Asian or Middle Eastern cultures, the factor that is most associated with high self-esteem is doing one's duty (Becker et al., 2014).

Boosting Self-Esteem in Late Adolescence

During late adolescence, self-esteem tends to increase (Savin-Williams & Demo, 1983; Harter, 1990). Peer relationships have been found to play an important role in this increase in self-esteem. As we discussed earlier, peer relations are an important influence on self-esteem, and having the emotional support of friends can lead to increased feelings of self-worth and higher self-esteem. The social support of parents and siblings is also an important influence on adolescents' self-esteem (Harter, 1990; Savin-Williams & Demo, 1983). Doing things well in areas that they care about, such as academics, dance, or sports, and receiving recognition from important people in their lives, will increase adolescents' feelings of self-worth. Having the emotional support, encouragement, and praise from these important peer and family relationships is an important contributor to self-esteem in late adolescence, as is highlighting and reinforcing the domains in which they are doing well.

Candela Citations

CC licensed content, Original

- Identity Formation. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...ity-formation/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Introduction to Emotional and Social Development in Adolescence. **Authored by**: Tera Jones. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...n-adolescence/. **License**: CC BY-SA: Attribution-ShareAlike
- Identity Formation. **Authored by**: Tera Jones. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...ity-formation/. **License**: CC BY-SA: Attribution-ShareAlike
- Introduction to Emotional and Social Development in Early Childhood. **Authored by**: Stephanie Loalada. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...rly-childhood/. **License**: CC BY: Attribution
- Self-Efficacy. **Authored by**: James E Maddux and Evan Kleiman. **Provided by**: NOBA. **Retrieved from**: https://nobaproject.com/textbooks/in.../self-efficacy. **License**: CC BY-SA: Attribution-ShareAlike
- Self-Esteem, Self-Efficacy, and Locus of Control. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/xcLKlPTG97k. **License**: CC BY: Attribution
- Developing the Self-Concept. **Authored by**: Tamara Ross . **License**: CC BY: Attribution

All rights reserved content

- Charles Cooley: Looking Glass Self. **Authored by**: Brooke Miller. **Provided by**: Khan Academy. **Retrieved from**: https://www.youtube.com/watch?v=bU0BQUa11ek. **License**: All Rights Reserved
- Self-Concept, Self-Identity, and Social Identity. **Authored by**: Shreena Desai. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/PaA0mLVQd3k. **License**: All Rights Reserved
- George Herbert Mead--The I and the Me. **Authored by**: Brooke Miller. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/PaA0mLVQd3k. **License**: All Rights Reserved

This page titled 8.1: Identity Formation is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

8.2: Identity Development Theory

A well-developed identity is comprised of goals, values, and beliefs to which a person is committed. It is the awareness of the consistency in self over time, the recognition of this consistency by others (Erikson, 1980). The process of identity development is both an individual and social phenomenon (Adams & Marshall, 1996). Much of this process is assumed during adolescence when cognitive development allows for an individual to construct a 'theory of self' (Elkind, 1998) based on exposure to role models and identity options (Erikson, 1980). Erikson (1968) believed this period of development to be an 'identity crisis,' a crucial turning point in which an individual must develop in one way or another, ushering the adolescent toward growth and differentiation. Identity is formed through a process of exploring options or choices and committing to an option based upon the outcome of their exploration. Failure to establish a well-developed sense of identity can result in identity confusion. Those experiencing identity confusion do not have a clear sense of who they are or their role in society.

Identity development is vital to a person's understanding of self and participation in their social systems. Adams and Marshall (1996) established that identity formation provides five functions: a structure and order to self-knowledge; a sense of consistency and coherence to beliefs, goals, and self-knowledge; a sense of continuity for one's history and future; goals and direction; a sense of personal control of their choices and outcomes.

Erikson's Identity vs. Role Confusion



Figure 8.3.1. Erik Erikson

Erik Erikson's theory of **psychosocial development** emphasizes the social nature of our development. His theory proposed that our psychosocial development takes place throughout our lifespan. Erikson suggested that how we interact with others is what affects our sense of self, or what he called the ego identity. He also believed that we are motivated by a need to achieve competence in certain areas of our lives.

According to psychosocial theory, we experience eight stages of development over our lifespan (Table 8.1), from infancy through late adulthood. At each stage, there is a conflict, or task, that we need to resolve. Successful completion of each developmental task results in a sense of competence and a healthy personality. Failure to master these tasks leads to feelings of inadequacy.

Table 8.3.1. Erikson's psychosocial Stages of Development

Stage	Age (years)	Developmental Task	Description
1	0–1	Trust vs. mistrust	Trust (or mistrust) that basic needs, such as nourishment and affection, will be met

Stage	Age (years)	Developmental Task	Description
2	1–3	Autonomy vs. shame/ doubt	Develop a sense of independence in many tasks
3	3–6	Initiative vs. guilt	Take the initiative on some activities—may develop guilt when unsuccessful or boundaries overstepped
4	7–11	Industry vs. inferiority	Develop self-confidence in abilities when competent or sense of inferiority when not
5	12–18	Identity vs. confusion	Experiment with and develop identity and roles
6	19–29	Intimacy vs. isolation	Establish intimacy and relationships with others
7	30–64	Generativity vs. stagnation	Contribute to society and be part of a family
8	65–	Integrity vs. despair	Assess and make sense of life and meaning of contributions

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 8.3.1. Erikson's Psychosocial Development explains all stages of this theory.

Erik Erikson believed that the primary psychosocial task of adolescence was establishing an identity. Erikson referred to life's fifth psychosocial task as one of **identity versus role confusion** when adolescents must work through the complexities of finding one's own identity. This stage includes questions regarding their appearance, vocational choices and career aspirations, education, relationships, sexuality, political and social views, personality, and interests. Erikson saw this as a period of confusion and experimentation regarding identity and one's life path. During adolescence, we experience **psychological moratorium**, *where teens put on hold commitment to an identity while exploring the options*.

Individual identity development is influenced by how they resolved all of the previous childhood psychosocial crises, and this adolescent stage is a bridge between the past and the future, childhood, and adulthood. Thus, in Erikson's view, an adolescent's central questions are, "Who am I?" and "Who do I want to be?" Identity formation was highlighted as the primary indicator of successful development during adolescence (in contrast to role confusion, which would be an indicator of not successfully meeting the task of adolescence). This crisis is resolved positively with **identity achievement** and the gain of fidelity (ability to be faithful) as a new virtue when adolescents have reconsidered the goals and values of their parents and culture. Some adolescents adopt the values and roles that their parents expect of them. Other teens develop identities that are in opposition to their parents but align with a peer group. This change is common as peer relationships become a central focus in adolescents' lives.

The culmination of this exploration is a more coherent view of oneself. Those who are unsuccessful at resolving this stage may withdraw further into social isolation or become lost in the crowd. However, more recent research suggests that few leave this age period with identity achievement and that most identity formation occurs during young adulthood (Côté, 2006).

Marcia's Identity Statuses

Expanding on Erikson's theory, Marcia (1966) described identity formation during adolescence as involving both *exploration* and *commitment* with respect to ideologies and occupations (e.g., religion, politics, career, relationships, gender roles). Identity development begins when individuals identify with role models who provide them with options to explore for whom they can become. As identity development progresses, adolescents are expected to make choices and commit to options within the confines of their social contexts. In some cases, options are not provided or are limited, and the individual will fail to commit or will commit without the opportunity to explore various options (Marcia, 1980).

Identity confusion/diffusion occurs when adolescents neither explore nor commit to any identities. **Foreclosure** occurs when an individual commits to an identity without exploring options. **A moratorium** is a state in which adolescents are actively exploring options but have not yet made commitments. As mentioned earlier, individuals who have explored different options, discovered their purpose, and have made identity commitments are in a state of **identity achievement.**

		Individual has committed to identity: Yes	Individual has committed to identity: No
Individual has explored identity options	Yes	Identity Achievement	Moratorium
	No	Foreclosure	Identity Diffusion

Figure 8.3.2. Marcia's identity statuses. Adapted from Discovering the Lifespan, by R. S. Feldman, 2009.

The least mature status, and one common in many children, is identity diffusion. **Identity diffusion** *is a status that characterizes those who have neither explored the options nor made a commitment to an identity*. Marcia (1980) proposed that when individuals enter the identity formation process, they have little awareness or experience with identity exploration or the expectation to commit to an identity. This period of identity diffusion is typical of children and young adolescents, but adolescents are expected to move out of this stage as they are exposed to role models and experiences that present them with identity possibilities. Those who persist in this identity may drift aimlessly with little connection to those around them or have little sense of purpose in life. Characteristics associated with prolonged diffusion include low self-esteem, being easily influenced by peers, a lack of meaningful friendships, little commitment or fortitude in activities or relationships, being self-absorbed, and self-indulgent.

Those in **identity foreclosure** *have committed to an identity without having explored the options*. Often, younger adolescents will enter a phase of foreclosure where they may, at least preliminarily, commit to an identity without an investment in the exploration process. This commitment is often a response to anxiety about uncertainty or change during adolescence or pressure from parents, social groups, or cultural expectations. It is expected that most adolescents will progress beyond the foreclosure phase as they can think independently, and we have multiple identity options. However, sometimes foreclosure will persist into late adolescence or even adulthood.

In some cases, parents may make these decisions for their children and do not grant the teen the opportunity to make choices. In other instances, teens may strongly identify with parents and others in their lives and wish to follow in their footsteps. Characteristics associated with prolonged foreclosure include well-behaved and obedient children with a high need for approval, authoritarian parenting style, low levels of tolerance or acceptance of change, high levels of conformity, and conventional thinking.

During high school and college years, teens and young adults move from identity diffusion and foreclosure toward moratorium and achievement. The most significant gains in identity development are in college, as college students are exposed to a greater variety of career choices, lifestyles, and beliefs. This experience is likely to spur questions regarding identity. A great deal of the identity work we do in adolescence and young adulthood is about values and goals, as we strive to articulate a personal vision or dream for what we hope to accomplish in the future (McAdams, 2013).

Identity moratorium *is a status that describes those who are actively exploring in an attempt to establish an identity but have yet to make any commitment*. This time can be an anxious and emotionally tense period as the adolescent experiments with different roles and explores various beliefs. Nothing is guaranteed, and there are many questions, but few answers. This moratorium phase is the precursor to identity achievement. During the moratorium period, it is normal for adolescents to be rebellious and uncooperative, avoid dealing with problems, procrastinate, experience low self-esteem, feel anxious, and be uncertain about decisions.

Identity achievement *refers to those who, after exploration, have committed*. It is a long process and is not often realized by the end of adolescence. Individuals who do reach identity achievement feel self-acceptance, stable self-definition, and commitment to their identity.

While Marcia's statuses help us understand the process of developing identity, there are several criticisms of this theory. First, identity status may not be global; different aspects of your identity may be in different statuses. An individual may be in multiple identity statuses at the same time for different aspects of identity. For example, one could be in the foreclosure status for their

religious identity, but in moratorium for career identity, and achievement for gender identity.

Further, identity statuses do not always develop in the sequence described above, although it is the most common progression. Not all people will reach identity achievement in all aspects of their identity, and not all may remain in identity achievement. There may be a third aspect of identity development, beyond exploration and commitment, which is the reconsideration of commitment. This addition would create a fifth status, **searching moratorium**. This status is a re-exploration after a commitment has been made (Meesus et al., 2012). It is not usual that commitments to aspects of our identity may change as we gain experience, and more options become available to explore. This searching moratorium may continue well into adulthood.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 8.3.2. Macia's Stages of Adolescent Identity Development summarizes the various identity statuses and how individuals may move through them.

Meeus-Crocetti's Identity Statuses

The Meeus-Crocetti model also holds that individuals enter adolescence with a set of commitments of at least minimal strength in important ideological and interpersonal identity domains, and that adolescents do not begin the identity development process with a "blank slate." In early adolescence, individuals may make commitments that build upon the ways in which adolescents have resolved the earlier Eriksonian psychosocial crises during childhood and have developed the ego strengths of hope, will, purpose, and competence (Erikson 1968).

The Meeus-Crocetti model differs from Marcia's in that adolescents manage their commitments in two ways: in-depth exploration and reconsideration. In-depth exploration is a process whereby individuals continuously monitor present commitments, which makes them more conscious and maintains them. Reconsideration is the process of comparing present commitments with alternative ones and deciding whether they need to be changed. The Meeus-Crocetti model, therefore, focuses on the dynamic between certainty (exploration in depth) and uncertainty (reconsideration), and distinguishes moratorium from **searching moratorium**, with the first trajectory indicating the inability to find a fitting identity, and the latter a purposeful and potentially productive exploration of alternative commitments.

Secondly, the Meeus-Crocetti model has a stronger process orientation than Marcia's model. Marcia views commitments as the outcome of the exploration process; after exploring various alternative commitments, adolescents choose one or more to which they will adhere. In contrast, the Meeus-Crocetti model assumes that commitments are formed and revised in an iterative process of choosing and reconsidering them. In addition, the model assumes that adolescents regularly reflect upon their present commitments.

Whereas commitment and in-depth exploration imply attempts to develop and maintain a sense of self (i.e., identity coherence or synthesis), reconsideration represents questioning and rethinking this sense of self (identity confusion).

Supporting Identity Development

As the process of identity development can be a confusing and challenging period, how can adults support adolescents through this process? First, affirm that the anxiety, doubts, and confusion are reasonable and that most teens do not complete identity achievement before graduating from high school. Exposing adolescents to various role models can help them imagine different roles or options for their future selves. Role models can come from within the family, schools, or community. Adults should talk with adolescents about their values, goals, and identities to help build awareness. They may be interested in knowing how others make decisions while developing their own identities. Finally, support the commitments that adolescents have made. Identity commitments can help someone feel grounded and less confused while exploring identity.

Candela Citations

CC licensed content, Original

- Identity Development Theory. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...opment-theory/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Identity Formation. **Authored by**: Tera Jones. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...ity-formation/. **License**: CC BY-SA: Attribution-ShareAlike
- Psychology. **Provided by**: OpenStax. **Retrieved from**: http://cnx.org/contents/4abf04bf-93a...espan-Theories. **License**: CC BY: Attribution
- Identity Statuses as Developmental Trajectories: A Five-Wave Longitudinal Study in Early-to-Middle and Middle-to-Late Adolescents. **Authored by**: Wim Meeus, Rens van de Schoot, Loes Keijsers & Susan Branje . **Retrieved from**: https://link.springer.com/article/10...964-011-9730-y. **License**: CC BY-NC: Attribution-NonCommercial

All rights reserved content

- Erikson's Psychosocial Development . **Authored by**: Shreena Desai. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/SIoKwUcmivk. **License**: All Rights Reserved
- Macia's Stages of Adolescent Identity Development. **Authored by**: Tiffany Dickie. **Retrieved from**: https://youtu.be/a8HIY_bqrVo. **License**: All Rights Reserved

This page titled 8.2: Identity Development Theory is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

8.3: Domains of Identity

As mentioned previously, there are several significant areas of identity development, and each domain may progress through the identity development process independently. Some of the most widely studied domains of identity development include cultural, gender, sexual, ideological, and occupational identity.

Cultural Identity

Cultural identity: Cultural identity refers to how people come to terms with whom they are based on their ethnic, racial, and cultural ancestry. According to the U.S. Census (2012), more than 40% of Americans under the age of 18 are from ethnic minorities. At this point, you are probably aware of the cultural groups to which you belong (i.e., "I am a Latino, middle-class, (almost) college-educated male"). Do you remember the process of coming to awareness of your cultural identity—when did you know you were white and what that meant? Was it during childhood, as a teenager, or reading this chapter? Has your understanding, or acceptance, of your racial heritage changed during your lifetime?

For most people, it does. Just as Piaget organized the growth of children according to various stages of development, cultural scholars have similarly organized racial awareness along models and stages. Before explaining the various models, let us make a couple of general comments about models. One, a model is not the thing it represents. Is the model car you played with as a child the same as the actual automobile? What were the differences? Size, time, maneuverability, details? These same kinds of differences exist between the model of racial identity development and the actual personal process. However, just like the car model gives a relatively accurate picture of the actual automobile, so do the racial identity models. Two, these models are general and not meant to fit perfectly to every individual's experience. With that said, let us examine the process of coming to an understanding of our racial identity.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 8.4.1. Demographic Structure of Society–Race and Ethnicity provides more information on the structures of race and ethnicity and how minority and majority identity is constructed.

To better understand this complex process, and in recognition of the above discussion regarding the distinctions in experiences for various cultural groups, we will present four cultural identity models—-Minority, Majority, Bi-racial, and Global Nomads.

Minority Identity Development

Acculturation is a process of social, psychological, and cultural change that stems from the balancing of two cultures while adapting to the prevailing culture of the society. Acculturation is a process in which an individual adopts, acquires, and adjusts to a new cultural environment. Individuals of a differing culture try to incorporate themselves into the more prevalent culture by participating in aspects of the more prevalent culture, such as their traditions, but still hold onto their original cultural values and traditions. The effects of acculturation can be seen at multiple levels in both the devotee of the prevailing culture and those who are assimilating into the culture (Cole, 2018).

At the individual level, the process of acculturation refers to the socialization process by which someone from outside of the dominant culture blends the values, customs, norms, cultural attitudes, and behaviors of the dominant culture. This process has been linked to changes in daily behavior, as well as numerous changes in psychological and physical well-being. As enculturation is used to describe the process of first-culture learning, acculturation can be thought of as second-culture learning.

The fourfold model is a bilinear model that categorizes acculturation strategies along two dimensions. The first dimension concerns the retention or rejection of an individual's minority or native culture (i.e. "Is it considered to be of value to maintain one's identity and characteristics?"). Whereas the second dimension concerns the adoption or rejection of the dominant group or host culture. ("Is it considered to be of value to maintain relationships with the larger society?") From this, four acculturation strategies emerge (Berry, 1997).

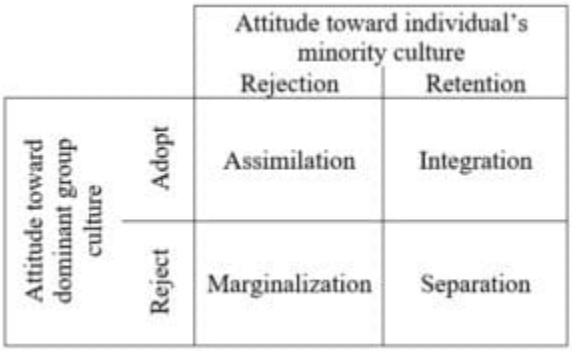


Figure 8.4.1. Berry's acculturation model.

- **Assimilation** occurs when individuals adopt the cultural norms of a dominant or host culture over their original culture. Sometimes this is forced by the dominant culture.
- **Separation** occurs when individuals reject the dominant or host culture in favor of preserving their culture of origin. Separation is often facilitated by immigration to ethnic enclaves.
- **Integration** occurs when individuals can adopt the cultural norms of the dominant or host culture while maintaining their culture of origin. Integration leads to, and is often synonymous with, biculturalism.
- **Marginalization** occurs when individuals reject both their culture of origin and the dominant culture.

Studies suggest that individuals' respective acculturation strategies can differ between their private and public life spheres (Arends-Tóth & van de Vijver, 2004). For instance, an individual may reject the values and norms of the dominant culture in his private life (separation), while simultaneously adapting to the dominant culture in public parts of his life (i.e., integration or assimilation).

Because people who identify as members of a minority group in the United States tend to stand out or get noticed as "other" or "different," they also tend to become aware of their identity sooner than individuals who are part of the majority group. For many ethnic minority teens, discovering one's ethnic identity is an integral part of identity formation. Phinney (1989) proposed a model of ethnic identity development that included stages of unexplored ethnic identity, ethnic identity search, and achieved ethnic identity.

Stage 1: Unexamined Identity. As the name of this stage suggests, the person in stage one of Phinney's model has little or no concern with ethnicity. They may be too young to pay attention to such matters or just not see the relationship between racial identity and their own life. One may accept the values and beliefs of the majority culture, even if they work against their cultural group.

Stage 2: Conformity. In stage two, the individual moves from a passive acceptance of the dominant culture's value system to a more active one. They consciously make choices to assimilate or fit in with the dominant culture even if this means putting down or denying their heritage. They may remain at this stage until a precipitating event forces them to question their belief system.

Stage 3: Resistance and Separation. The move from stage two to stage three can be a complicated process as it necessitates a certain level of critical thinking and self-reflection. If you have ever tried to wrestle with aspects of your belief system, then you can imagine the struggle. The move may be triggered by a national event such as the case of "Michael Brown, an unarmed black teenager, was shot and killed on August 9, by Darren Wilson, a white police officer, in Ferguson, MO (Buchanan). It may be fostered on a more individual scale, such as enrolling in a Women's Studies class and learning about the specifics of women's history in America. Martin Luther King Jr. moved to this stage around age six after the mother of King's White neighborhood friends told them that he could not play with her children anymore because he was Black. A person in this stage may simply reject all of their previously held beliefs and positive feelings about the dominant culture with those of their group, or they may learn how to critically examine and hold beliefs from a variety of cultural perspectives, which leads to stage four.

Stage 4: Integration. The final stage is one where the individual reaches an achieved identity. They learn to value diversity, seeing race, gender, class, and ethnic relations as a complex process instead of an either/or dichotomy. Their aim is to end oppression against all groups, not just their own.

Majority Identity Development

Since White is still considered normative in the United States, White people may take their identity and the corresponding privilege for granted. While we are using the following four stages of development to refer to racial and ethnic identity development, they may also be useful when considering other minority aspects of our identity, such as gender, class, or sexual orientation. Moreover, there is no set age or time period that a person reaches or spends in a particular stage, and not everyone will reach the final stage.

The following model was developed by Rita Hardiman (1994) and contains some similarities with Phinney's minority identity development model.

Stage 1: Unexamined Identity. This stage is the same for both minority and majority individuals. While children may notice that some of their playmates have different colored skin, they do not fear or feel superior to them.

Stage 2: Acceptance. The move to stage two signals a passive or active acceptance of the dominant ideology—either way, the individual does not recognize that he or she has been socialized into accepting it. When a White person goes the route of passive acceptance, they have no conscious awareness of being White. However, they may hold some subtly racist assumptions such as "[p]eople of color are culturally different, whereas Whites are individuals with no group identity, culture, or shared experience of racial privilege." Alternatively, White art forms are "classical," whereas works of art by people of color are considered "ethnic art," "folk art," or "crafts" (Martin and Nakayama 132). People in this stage may minimize contact with minorities or act in a "let me help you" fashion toward them. If a White person in this stage follows the active acceptance path, then they are conscious of their White identity and may act in ways that highlight it. Refusing to eat food from other cultures or watch foreign films are examples of the active acceptance path.

Stage 3: Resistance. Just as the move from stage two to stage three in the minority development model required a great deal of critical thought, so does this juncture. Here the members of the majority group cease blaming the members of minority groups for their conditions and see socioeconomic realities as a result of an unjust and biased sociopolitical system. There is an overall move from seeing one's station in life as a purely individual event or responsibility to a more systemic issue. Here, people may feel guilty about being White and ashamed of some of the historical actions taken by some White people. They may try to associate with only people of color, or they may attempt to exorcise aspects of White privilege from their daily lives.

Stage 4: Redefinition. In this stage, people attempt to redefine what it means to be White without the racist baggage. They can move beyond White guilt and recognize that White people and people of all cultures contain both racist and nonracist elements and that there are many historical and cultural events of which White people can be proud.

Stage 5: Integration. In the last phase, individuals can accept their Whiteness or other majority aspects of their identity and integrate it into other parts of their lives. There is simultaneous self-acceptance and acceptance of others.

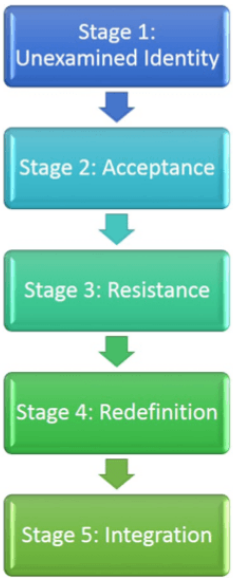


Figure 8.4.2. Hardiman's stages of majority identity development

Bi- or Multiracial Identity Development

Originally, people thought that bi-racial individuals followed the development model of minority individuals. However, given that we now know that race is a social construct, it makes sense to realize that a person of mixed racial ancestry is likely to be viewed differently (from both the dominant culture and the individual's own culture) than a minority individual. Thus, they are likely to experience a social reality unique to their experience. The following five-stage model is derived from the work of W.S. Carlos Poston.

Stage 1: Personal Identity. Poston's first stage is much like the unexamined identity stage in the previous two models. Again, children are not aware of race as a value-based social category and derive their personal identity from individual personality features instead of cultural ones.

Stage 2: Group Categorization. In the move from stage one to two, the person goes from no racial or cultural awareness to having to choose between one or the other. In a family where the father is Black, and the mother is Japanese, the child may be asked by members of both families to decide if he or she is Black or Japanese. Choosing both is not an option in this stage.

Stage 3: Enmeshment/Denial. Following the choice made in stage two, individuals attempt to immerse themselves in one culture while denying ties to the other. This process may result in guilt or feelings of distance from the parent and family whose culture was rejected in stage two. If these feelings are resolved, then the child moves to the next stage. If not, they remain here.

Stage 4: Appreciation. When feelings of guilt and anger are resolved, the person can work to appreciate all of the cultures that shape their identity. While there is an attempt to learn about the diversity of their heritage, they will still identify primarily with the culture chosen in stage two.

Stage 5: Integration. In the fifth and final stage, the once fragmented parts of the person's identity are brought together to create a unique whole. There is an integration of cultures throughout all facets of a person's life—dress, food, holidays, spirituality, language, and communication.

Global Nomads

People who move around a lot may develop a multicultural identity as a result of their extensive international travel. International teachers, business people, and military personnel are examples of global nomads (Martin & Nakayama). One of the earlier theories to describe this model of development was called the U-curve theory because the stages were thought to follow the pattern of the letter U. The model has since been revised in the form of a W or a series of ups and downs. This pattern is thought better to represent the up and down nature of this process.

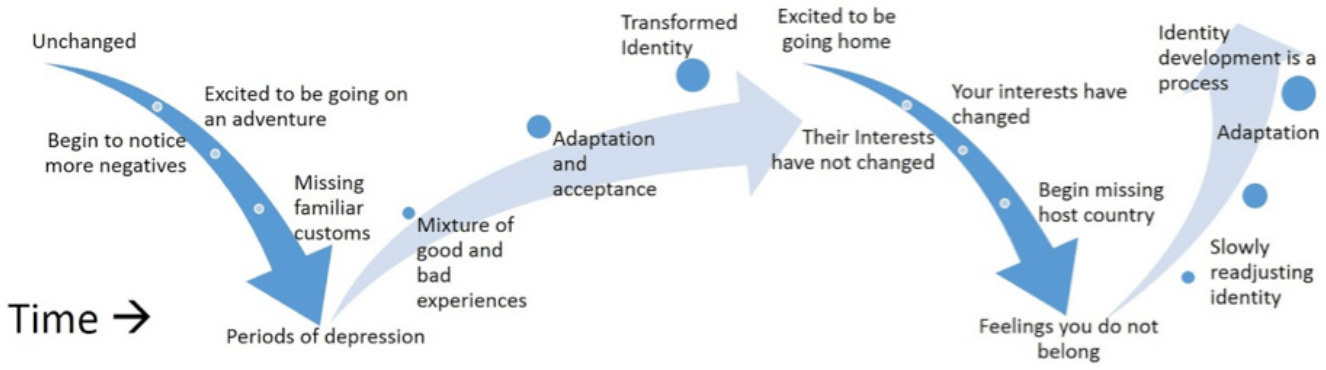


Figure 8.4.3. Identity development model for global nomads.

Stage 1: Anticipation and Excitement. If you have ever planned for an international trip, what were some of the things you did to prepare? Did you do something like buy a guide book to learn some of the native customs, figure out the local diet to see if you would need to make any special accommodations, learn the language, or at least some handy phrases perhaps? All of these acts characterize stage one in which people are filled with positive feelings about their upcoming journey and try to ready themselves.

Stage 2: Culture Shock. Once the excitement has worn off or you are confronted with an unexpected or unpleasant event, you may experience culture shock. This experience is the move from the top of the U or W to the bottom. Culture shock can result from physical, psychological, or emotional causes often correlating with an unpleasant and unfamiliar event. When individuals have spent most of their lives in a particular country, they will most likely experience culture shock when they travel overseas. The differences in cultural language, customs, and even food may be overwhelming to someone that has never experienced them before.

Stage 3: Adaptation. The final stage at the top of the U and W is a feeling of comfortableness: being somewhat familiar with the new cultural patterns and beliefs. After spending more time in a new country and learning its cultural patterns and beliefs, individuals may feel more welcomed into the society by accepting and adapting to these cultural differences.

Gender Identity



Gender identity is one's self-conception of their gender. Sex is the term to refer to the biological differences between males and females, such as the genitalia and genetic differences. While gender refers to the socially constructed characteristics of women and men, such as norms, roles, and relationships between groups of women and men. **Cisgender** is an umbrella term used to describe people whose sense of personal identity and gender corresponds with their birth sex, while **transgender** is a term used to describe people whose sense of personal identity does not correspond with their birth sex.

Gender expression, or how one demonstrates gender (based on traditional gender role norms related to clothing, behavior, and

interactions), can be feminine, masculine, androgynous, or somewhere along a spectrum. Many adolescents use their analytic, hypothetical thinking to question traditional gender roles and expression. If their genetically assigned sex does not line up with their gender identity, they may refer to themselves as transgender, non-binary, or gender-nonconforming.

Fluidity and uncertainty regarding sex and gender are especially common during early adolescence when hormones increase and fluctuate, creating a difficulty of self-acceptance and identity achievement (Reisner et al., 2016). Gender identity is becoming an increasingly prolonged task as attitudes and norms regarding gender keep changing. The roles appropriate for males and females are evolving, and some adolescents may foreclose on a gender identity as a way of dealing with this uncertainty by adopting more stereotypic male or female roles (Sinclair & Carlsson, 2013). Those that identify as transgender or 'other' face even more significant challenges.

Biological Approach to Gender Identity Development

The biological approach explores how gender identity development is influenced by genetics, biological sex characteristics, brain development, and hormone exposure.

Humans usually have 23 pairs of chromosomes, each containing thousands of genes that govern various aspects of our development. The 23rd pair of chromosomes are called the sex chromosomes. This pair determines a person's sex, among other functions. Most often, if a person has an XX pair, they will develop into a female, and if they have an XY pair, then they will be male.

Around the sixth week of prenatal development, the SRY gene on the Y chromosome signals the body to develop as a male. This chemical signal triggers a cascade of other hormones that will tell the gonads to develop into testes. If the embryo does not have a Y or the if, for some reason, the SRY gene is missing or not activate, then the embryo will develop female characteristics. The baby is born and lives as a female, but genetically her chromosomes are XY. Rat studies have found that the reverse is also possible. Researchers implanted the SRY gene in rats with XX chromosomes, and the result was male baby mice.

Individuals with atypical chromosomes may also develop differently than their typical XX or XY counterparts. These chromosomal abnormalities include syndromes where a person may have only one sex chromosome or three sex chromosomes. Turner's Syndrome is a condition where a female has only one X chromosome (XO). This missing chromosome results in a female external appearance but lacking ovaries. These XO females do not mature through puberty like XX females and they may also have webbed skin around the neck. Cognitively, these females tend to have high verbal skills, poor spatial and math skills, and poor social adjustment.

Klinefelter's Syndrome is a condition where a male has an extra X chromosome (XXY). This XXY combination results in male genitals, although their genitals may be underdeveloped even into adulthood. Even after puberty, they tend to have less body and facial hair and may develop breasts. From infancy, these children often have a passive, cooperative, and shy personality that remains into adulthood. Cognitively, they are often late to talk and have poor language and reading skills.

As we learned in the physical development chapter, sex hormones cause biological changes to the body and brain. While the same sex hormones are present in males and females, the amount of each hormone and the effect of that hormone on the body is different. Males have much higher levels of testosterone than females. In the womb, testosterone causes the development of male sex organs. It also impacts the hypothalamus, causing an enlarged sexually dimorphic nucleus, and results in the 'masculinization' of the brain. Around the same time, testosterone may contribute to greater lateralization of the brain, resulting in the two halves working more independently of each other. Testosterone also affects what we often consider male behaviors, such as aggression, competitiveness, visual-spatial skills, and higher sex drive.

Cognitive Approaches to Gender Identity Development

Cognitive learning theory states that children develop gender at their own levels. At each stage, the child thinks about gender characteristically. As a child moves forward through stages, their understanding of gender becomes more complex.

The following cognitive model, formulated by Kohlberg, asserts that children recognize their gender identity around age three but do not see it as relatively fixed until the ages of five to seven. This identity marker provides children with a schema, a set of observed or spoken rules for how social or cultural interactions should happen. Information about gender is gathered from the environment; thus, children look for role models to emulate maleness or femaleness as they grow.

Stage 1: Gender Labeling (2-3.5 years). The child can label their gender correctly.

Stage 2: Gender Stability (3.5-4.5 years). The child's gender remains the same across time.

Stage 3: Gender Constancy (6 years). The child's gender is independent of external features (e.g., clothing, hairstyle).

Once children form a basic gender identity, they start to develop gender schemas. These gender schemas are organized set of gender-related beliefs that influence behaviors. The formation of these schemas explains the process by which gender stereotypes become so psychologically ingrained in our society.

According to Sandra Bem's Gender Schema Theory, gender schemas can be organized into four general categories. The **sex-type schema** is the belief that gender matches biological sex. **Sex-reversed schema** is when gender is the opposite of biological sex. Possessing both masculine and feminine traits is an **androgynous schema**. While possessing few masculine or feminine traits is an **undifferentiated schema**.

Social learning approach to gender identity development

Social Learning Theory is based on outward motivational factors that argue that if children receive positive reinforcement, they are motivated to continue a particular behavior. If they receive punishment or other indicators of disapproval, they are more motivated to stop that behavior. In terms of gender development, children receive praise if they engage in culturally appropriate gender displays and punishment if they do not. When aggressiveness in boys is met with acceptance or a "boys will be boys" attitude, but a girl's aggressiveness earns them little attention, the two children learn different meanings for aggressiveness as it relates to their gender development. Thus, boys may continue being aggressive while girls may drop it out of their repertoire.

Transgender Identity Development

Individuals who identify with the role that is different from their biological sex are called **transgender**. Approximately 1.4 million U.S. adults or .6% of the population are transgender, according to a 2016 report (Flores et al., 2016).

Transgender individuals may choose to alter their bodies through medical interventions such as surgery and hormonal therapy so that their physical being is better aligned with gender identity. They may also be known as male-to-female (MTF) or female-to-male (FTM). Not all transgender individuals choose to alter their bodies; many will maintain their original anatomy but may present themselves to society as another gender. This expression is typically done by adopting the dress, hairstyle, mannerisms, or other characteristics typically assigned to another gender. It is important to note that people who cross-dress or wear clothing that is traditionally assigned to a different gender is not the same as identifying as transgender. Cross-dressing is typically a form of self-expression, entertainment, or personal style, and it is not necessarily an expression against one's assigned gender (APA 2008).

After years of controversy over the treatment of sex and gender in the American Psychiatric Association Diagnostic and Statistical Manual for Mental Disorders (Drescher 2010), the most recent edition, DSM-5, responded to allegations that the term "gender identity disorder" is stigmatizing by replacing it with "**gender dysphoria**." Gender identity disorder as a diagnostic category stigmatized the patient by implying there was something "disordered" about them. Removing the word "disorder" also removed some of the stigmas while still maintaining a diagnosis category that will protect patient access to care, including hormone therapy and gender reassignment surgery.

In the DSM-5, gender dysphoria is a condition of people whose gender at birth is contrary to the one with which they identify. For a person to be diagnosed with gender dysphoria, there must be a marked difference between the individual's expressed/experienced gender and the gender others would assign him or her, and it must continue for at least six months. In children, the desire to be of the other gender must be present and verbalized (APA, 2013). Changing the clinical description may contribute to greater acceptance of transgender people in society. A 2017 poll showed that 54% of Americans believe gender is determined by sex at birth, and 32% say society has "gone too far" in accepting transgender people; views are sharply divided along political and religious lines (Salam, 2018).

Many psychologists and the transgender community are now advocating an affirmative approach to transgender identity development. This approach advocates that gender non-conformity is not a pathology but a normal human variation. Gender non-conforming children do not systemically need mental health treatment if they are not "pathological." However, care-givers of gender non-conforming children can benefit from a mixture of psycho-educational and community-oriented interventions. Some children or teens may benefit from counseling or other interventions to help them cope with familial or societal reactions to their gender-nonconformity.

Studies show that people who identify as transgender are twice as likely to experience assault or discrimination as non-transgender individuals; they are also one and a half times more likely to experience intimidation (National Coalition of Anti-Violence Programs 2010; Giovanniello, 2013). Trans women of color are most likely to be victims of abuse. There are also systematic aggressions, such as "deadnaming," (whereby trans people are referred to by their birth name and gender), laws restricting transpersons from accessing gender-specific facilities (e.g., bathrooms), or denying protected-class designations to prevent discrimination in housing, schools, and workplaces. Organizations such as the National Coalition of Anti-Violence Programs and Global Action for Trans Equality work to prevent, respond to and end all types of violence against transgender and homosexual individuals. These organizations hope that by educating the public about gender identity and empowering transgender individuals, this violence will end.

Like other domains of identity, stage models for transgender identity development have helped describe a typical progression in identity formation. Lev's Transgender Emergence Model looks at how trans people come to understand their identity. Lev is working from a counseling/therapeutic point of view, thus this model talks about what the individual is going through and the responsibility of the counselor.

Stage 1: Awareness. In this first stage of awareness, gender-variant people are often in great distress; the therapeutic task is the normalization of the experiences involved in emerging as transgender.

Stage 2: Seeking Information/Reaching Out. In the second stage, gender-variant people seek to gain education and support about transgenderism; the therapeutic task is to facilitate linkages and encourage outreach.

Stage 3: Disclosure to Significant Others. The third stage involves the disclosure of transgenderism to significant others (spouses, partners, family members, and friends); the therapeutic task involves supporting the transgender person's integration in the family system.

Stage 4: Exploration (Identity & Self-Labeling). The fourth stage involves the exploration of various (transgender) identities; the therapeutic task is to support the articulation and comfort with one's gendered identity.

Stage 5: Exploration (Transition Issues & Possible Body Modification). The fifth stage involves exploring options for transition regarding identity, presentation, and body modification; the therapeutic task is the resolution of the decision and advocacy toward their manifestation.

Stage 6: Integration (Acceptance & Post-Transition Issues). In the sixth stage, the gender-variant person can integrate and synthesize (transgender) identity; the therapeutic task is to support adaptation to transition-related issues.

Sexual Identity

Sexual identity is how one thinks of oneself in terms of to whom one is romantically or sexually attracted (Reiter, 1989). Sexual identity may also refer to **sexual orientation identity**, which is when people identify or dis-identify with a sexual orientation or choose not to identify with a sexual orientation (APA, 2009). Sexual identity and sexual behavior are closely related to sexual orientation but they are distinguished (Reiter, 1989), with *identity* referring to an individual's conception of themselves, *behavior* referring to actual sexual acts performed by the individual, and *sexual orientation* referring to romantic or sexual attractions toward persons of the opposite sex or gender, the same sex or gender, to both sexes or more than one gender, or no one.

Sexual orientation is typically discussed as four categories: *heterosexuality*, the attraction to individuals of the other sex; *homosexuality*, the attraction to individuals of the same sex; *bisexuality*, the attraction to individuals of either sex; and *asexuality*, no attraction to either sex. However, others view sexual orientation as less categorical and more of a continuum.

Alfred Kinsey was among the first to conceptualize sexuality as a continuum rather than a strict dichotomy of gay or straight. He created a six-point rating scale that ranges from exclusively heterosexual to exclusively homosexual (Figure 8.4.4). In his 1948 work, *Sexual Behavior in the Human Male*, Kinsey writes, "Males do not represent two discrete populations, heterosexual and homosexual. The world is not to be divided into sheep and goats … The living world is a continuum in each and every one of its aspects" (Kinsey, 1948).

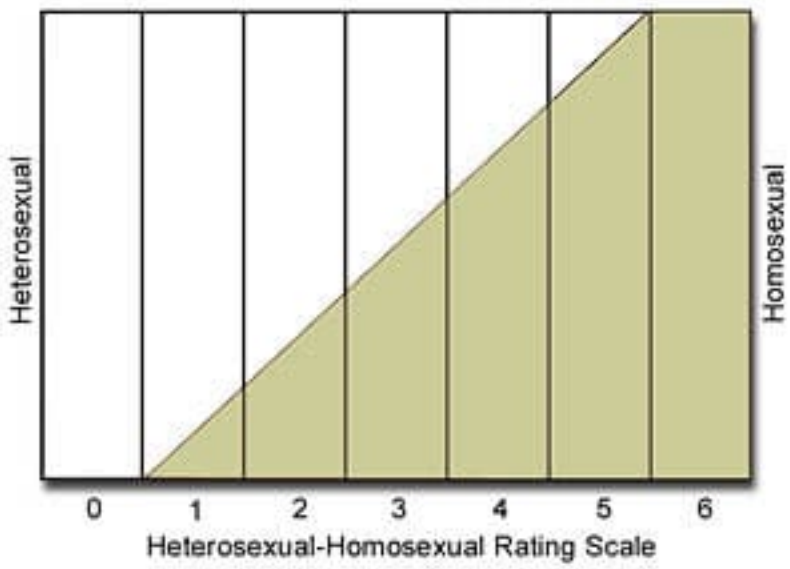


Figure. 8.4.4. The Kinsey scale indicates that sexuality can be measured by more than just heterosexuality and homosexuality.

Later scholarship by Eve Kosofsky Sedgwick expanded on Kinsey's notions. She coined the term "homosocial" to oppose "homosexual," describing nonsexual same-sex relations. Sedgwick recognized that in U.S. culture, males are subject to a clear divide between the two sides of this continuum, whereas females enjoy more fluidity. This difference can be illustrated by the way women in the United States can express homosocial feelings (nonsexual regard for people of the same sex) through hugging, handholding, and physical closeness. In contrast, U.S. males refrain from these expressions since they violate the heteronormative expectation that male sexual attraction should be exclusively for females. Research suggests that it is easier for women to violate these norms than men because men are subject to more social disapproval for being physically close to other men (Sedgwick, 1985).

The issue of sexual identity and orientation can be further complicated when considering differences in romantic attraction versus sexual attraction. A person could be romantically interested in the same sex, different sex, or any gender but could feel sexually attracted to the same or different group. For example, an individual could be interested in a romantic relationship with males but be sexually attracted to males and females. Alternatively, someone may be open to a romantic relationship with any gender but is primarily only sexually attracted to one sex.

The United States is a **heteronormative society**, meaning it assumes that heterosexuality is the norm and that sexual orientation is biologically determined and unambiguous. Consider that homosexuals are often asked, "When did you know you were gay?" but heterosexuals are rarely asked, "When did you know that you were straight?" (Ryle 2011). However, there is no scientific consensus regarding the exact reasons why an individual holds a particular sexual orientation. Research has been conducted to study the possible genetic, hormonal, developmental, social, and cultural influences on sexual orientation, but there has been no definitive evidence that links sexual orientation to one factor (APA, 2008).

According to current understanding, individuals are usually aware of their sexual orientation between middle childhood and early adolescence (APA, 2008). They do not have to participate in sexual activity to be aware of these emotional, romantic, and physical attractions; people can be celibate and still recognize their sexual orientation. Homosexual women (also referred to as lesbians), homosexual men (also referred to as gays), and bisexuals of both genders may have very different experiences of discovering and accepting their sexual orientation. At the point of puberty, some may be able to announce their sexual orientations, while others may be unready or unwilling to make their homosexuality or bisexuality known since it goes against U.S. society's historical norms (APA 2008).

Most of the research on sexual orientation identity development focuses on the development of people who are attracted to the same sex. Many people who feel attracted to members of their own sex 'come out' at some point in their lives. *Coming out* is described in three phases. The first phase is the phase of "knowing oneself," and the realization emerges that one is sexually and emotionally attracted to members of one's own sex. This step is often described as an internal coming out and can occur in childhood or at puberty, but sometimes as late as age 40 or older. The second phase involves a decision to come out to others, e.g., family, friends, and/or colleagues. The third phase involves living openly as an LGBT person (Human Rights Campaign, 2007). In the United States today, people often come out during high school or college age. At this age, they may not trust or ask for

help from others, especially when their orientation is not accepted in society. Sometimes they do not inform their own families.

According to Rosario, Schrimshaw, Hunter, Braun (2006), “the development of a lesbian, gay, or bisexual (LGB), sexual identity is a complex and often difficult process. Unlike members of other minority groups (e.g., ethnic and racial minorities), most LGB individuals are not raised in a community of similar others from whom they learn about their identity. Their identity may not be reinforced and supported by their community. Instead, “LGB individuals are often raised in communities that are either ignorant of or openly hostile toward homosexuality.”

Cass’ Homosexual Identity Model

Cass (1979) was one of the early creators of a model for explaining how individuals progress through the development of a homosexual identity. Cass proposed six stages. It may take several years to get through a particular stage and not all make it to stage 6. “Foreclosure” (when an individual denies their identity or hides it from others) can occur at any stage and halt the process.

Stage 1: Identity Awareness. The individual is aware of being “different” from others.

Stage 2: Identity Comparison. The individual compares their feelings and emotions to those they identify as heterosexual.

Stage 3: Identity Tolerance. The individual tolerates their identity as being non-heterosexual.

Stage 4: Identity Acceptance. The individual accepts their new identity and begins to become active in the “gay community.”

Stage 5: Identity Pride. The individual becomes proud of their identity and becomes fully immersed in “gay culture.”

Stage 6: Identity Synthesis. The individual fully accepts their identity and synthesizes their former “heterosexual life” and their new identity.

A criticism of Cass’ model is that her research primarily studied white gay men and lesbian women of middle- to upper-class status. This stage model is not necessarily reflective of the process a bisexual or transgender individual may experience and, ultimately, may not be reflective of the process experienced by all non-heterosexual individuals.

Some individuals with unwanted sexual attractions may choose to actively dis-identify with a sexual minority identity, which creates a different sexual orientation identity from their actual sexual orientation. Sexual orientation identity, but not sexual orientation, can change through psychotherapy, support groups, and life events. A person who has homosexual feelings can self-identify in various ways. An individual may come to accept an LGB identity, to develop a heterosexual identity, to reject an LGB identity while choosing to identify as ex-gay or to refrain from specifying a sexual identity (APA, 2009).

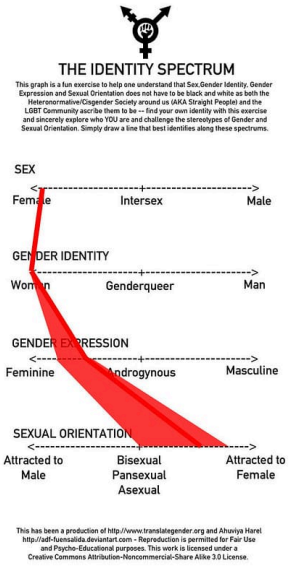


Figure 8.4.5. This identity spectrum shows the fluidity between sex, gender identity, gender expression, and sexual orientation.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 8.4.2. Demographic Structure of Society–Sex, Gender, and Sexual Orientation explains various aspects of gender and sexual identity.

Ideological Group Identity

Religious identity is a specific type of identity formation. Particularly, it is the sense of group membership to a religion and the importance of this group membership as it pertains to one's self-concept. Religious identity is not necessarily the same as religiousness or religiosity. Although these terms share a commonality, religiousness and religiosity refer to both the value of religious group membership as well as participation in religious events (e.g., going to church) (Arweck & Nesbitt, 2010; King et al., 1997). Religious identity, on the other hand, refers specifically to religious group membership regardless of religious activity or participation.

Similar to other forms of identity formation, such as ethnic and cultural identity, the religious context can generally provide a perspective from which to view the world, opportunities to socialize with a spectrum of individuals from different generations, and a set of fundamental principles to live out (King & Boratzis, 2004). These foundations can come to shape an individual's identity.

The religious views of teens are often similar to those of their families (Kim-Spoon, Longo, & McCullough, 2012). Most teens may question specific customs, practices, or ideas in the faith of their parents, but few reject the religion of their families entirely.

An adolescent's political identity is also influenced by their parents' political beliefs. A new trend in the 21st century is a decrease in party affiliation among adults. Many adults do not align themselves with either the democratic or republican party, and their teenage children reflect their parents' lack of party affiliation. Although adolescents do tend to be more liberal than their elders, especially on social issues (Taylor, 2014), like other aspects of identity formation, adolescents' interest in politics is predicted by their parents' involvement and by current events (Stattin et al., 2017).

Occupational Identity Development

While adolescents in earlier generations envisioned themselves as working in a particular job and often worked as an apprentice or part-time in such occupations as teenagers, this is rarely the case today. Occupational identity takes longer to develop, as most of today's occupations require specific skills and knowledge that will require additional education or are acquired on the job itself. Besides, many of the jobs held by teens are not in occupations that most teens will seek as adults. (See career development theories in Chapter 7 for more information).

Candela Citations

CC licensed content, Original

- Domains of Identity. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...s-of-identity/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Acculturation. **Provided by**: Wikipedia. **Retrieved from**: https://en.wikipedia.org/wiki/Accult...ite_note-:0-22. **License**: CC BY: Attribution
- Religious Identity. **Provided by**: Wikipedia. **Retrieved from**: https://en.wikipedia.org/wiki/Religious_identity. **License**: CC BY: Attribution

- Sexual Identity. **Provided by**: Wikipedia. **Retrieved from**: https://en.wikipedia.org/wiki/Sexual_identity. **License**: CC BY: Attribution
- Knowing Where We Belong. **Provided by**: Lumen Leaning. **Retrieved from**: https://courses.lumenlearning.com/in...ere-we-belong/. **License**: CC BY-SA: Attribution-ShareAlike
- Introduction to Sociology 2e. **Provided by**: Open Stax. **Retrieved from**: https://openstax.org/books/introduct...sex-and-gender. **License**: CC BY: Attribution
- Identity Formation. **Authored by**: Tera Jones. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...ity-formation/. **License**: CC BY-SA: Attribution-ShareAlike

All rights reserved content

- Demographic structure of society - sex, gender, and sexual orientation. **Authored by**: Sydney Brown. **Provided by**: Khan Academy. **Retrieved from**: https://youtu.be/Hkmsu9Tl7NE. **License**: All Rights Reserved
- Demographic Structure of Society--Race and Ethnicity. **Authored by**: Sydney Brown. **Provided by**: Khan Academy. **Retrieved from**: http://Demographic%20Structure%20of%20Society--Race%20and%20Ethnicity. **License**: All Rights Reserved

This page titled 8.3: Domains of Identity is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

cisgender: an umbrella term used to describe people whose sense of personal identity and gender corresponds with their birth sex

foreclosure: a term for premature identity formation, which occurs when an adolescent adopts his or her parents' or society's role and values without questioning or analysis, according to Marcia's theory

gender: a term that refers to social or cultural distinctions of behaviors that are considered male or female

gender dysphoria: a condition listed in the DSM-5 in which people whose gender at birth is contrary to the identity with which they identify. This condition replaces "gender identity disorder."

gender expression: how one demonstrates gender (based on traditional gender role norms related to clothing, behavior, and interactions); can be feminine, masculine, androgynous, or somewhere along a spectrum

gender identity: the way that one thinks about gender and self-identifies can be woman, man, or genderqueer

identity achievement: Erikson's term for the attainment of identity, or the point at which a person understands who he or she is as a unique individual, in accord with past experiences and future plans; already questioned and made commitment according to Marcia's theory

identity vs. role confusion: Erikson's term for the fifth stage of development, in which the person tries to figure out "Who am I?" but is confused as to which of many possible roles to adopt

moratorium: an adolescent's choice of a socially acceptable way to postpone making identity-achievement decisions. Going to college is a typical example. Engaged in questioning, but not yet committing, according to Marcia's theory

role confusion: a situation in which an adolescent does not seem to know or care what his or her identity is. (Sometimes called identity diffusion or role diffusion)

self-concept: our perceptions of our behavior, abilities, and unique characteristics. It is essentially a mental picture of who you are as a person. For example, beliefs such as "I am a good friend" or "I am a kind person" are part of an overall self-concept

self-esteem: considered an essential component of emotional health, self-esteem encompasses both self-confidence and self-acceptance. It is the way individuals perceive themselves and their self-value

sex: a term that denotes the presence of physical or physiological differences between males and females

transgender: a term used to describe people whose sense of personal identity does not correspond with their birth sex

This page titled 8.4: Glossary is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

9: MORAL DEVELOPMENT

Learning Objectives

- Identify perspectives on moral development
- Describe Piaget's theory of moral development
- Describe Kohlberg's theory of moral development
- Describe Gilligan's theory of moral development
- Identify influences on moral development
- Describe moral development during adolescence

Morality is a system of beliefs about what is right and good compared to what is wrong or bad. These are principles for how individuals ought to treat one another with respect to justice, others' welfare, and rights. In order to investigate how individuals understand morality, it is essential to measure their attitudes, beliefs, emotions, and behaviors that contribute to moral understanding. **Moral beliefs** are related to, but not identical to, moral behavior. It is possible to know the right thing to do but not actually do it. Moral belief is also not the same as knowledge of social conventions, which are arbitrary customs needed for the smooth operation of society.

Moral development focuses on the emergence, change, and understanding of morality over the lifespan. As it pertains to morality, developmentalists study the role of peers and parents in facilitating moral development, the role of conscience and values, socialization and cultural influences, empathy and altruism, and positive development. The interest in morality spans many disciplines (e.g., philosophy, economics, biology, and political science) and specializations within psychology (e.g., social, cognitive, and cultural). Moral developmental psychology research focuses on questions of origins and changes in morality across the lifespan.

9.1: Theories of Moral Development

9.2: Modern Views of Moral Development

9.3: Influences on Moral Development

9.4: Moral Reasoning in Adolescence

9.5: Glossary

This page titled 9: Moral Development is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

9.1: Theories of Moral Development

The founder of psychoanalysis, Freud (1962), proposed the existence of a tension between the needs of society and the individual. According to Freud, moral development proceeds when the individual's selfish desires are repressed and replaced by the values of important socializing agents in one's life (for instance, one's parents). A proponent of behaviorism, Skinner (1972) similarly focused on socialization as the primary force behind moral development. In contrast to Freud's notion of a struggle between internal and external forces, Skinner focused on the power of external forces (reinforcement contingencies) to shape an individual's development. While both Freud and Skinner focused on the external forces that bear on morality (parents in the case of Freud, and behavioral contingencies in the case of Skinner), Piaget (1965) focused on the individual's construction, construal, and interpretation of morality from a social-cognitive and social-emotional perspective.

Kohlberg (1963) expanded upon Piagetian notions of moral development. While they both viewed moral development as a result of a deliberate attempt to increase the coordination and integration of one's orientation to the world, Kohlberg provided a systematic 3-level, 6-stage sequence reflecting changes in moral judgment throughout the lifespan. Specifically, Kohlberg argued that development proceeds from a selfish desire to avoid punishment (personal), to a concern for group functioning (societal), to a concern for the consistent application of universal ethical principles (moral).

Turiel (1983) argued for a social domain approach to social cognition, delineating how individuals differentiate moral (fairness, equality, justice), societal (conventions, group functioning, traditions), and psychological (personal, individual prerogative) concepts from early in development throughout the lifespan. Over the past 40 years, research findings have supported this model, demonstrating how children, adolescents, and adults differentiate moral rules from conventional rules, identify the personal domain as a nonregulated domain, and evaluate multifaceted (or complex) situations that involve more than one domain.

For the past 20 years, researchers have expanded the field of moral development, applying moral judgment, reasoning, and emotion attribution to topics such as prejudice, aggression, theory of mind, emotions, empathy, peer relationships, and parent-child interactions.

Piaget's Theory of Moral Development

To understand adult morality, Piaget believed that it was necessary to study both how morality manifests in the child's world as well as the factors that contribute to the emergence of central moral concepts such as welfare, justice, and rights. By interviewing children, Piaget (1965) found that young children were focused on authority mandates and that with age, children become autonomous, evaluating actions from a set of independent principles of morality.

He developed two phases of moral development, one common among children and the other common among adults.

Heteronomous Phase

The first is the Heteronomous Phase. This phase, more common among children, is characterized by the idea that rules come from authority figures in one's life, such as parents, teachers, and God. It also involves the idea that rules are permanent no matter what. Thirdly, this phase of moral development includes the belief that "naughty" behavior must always be punished and that the punishment will be proportional. This absolutism in moral development is seen in children's play from the age of 5, where they exhibit a blind belief in the rules and ideas of right and wrong passed to them by their elders.

Autonomous Phase

The second phase in Piaget's theory of moral development is referred to as the Autonomous Phase. This phase is more common after one has matured and is no longer a child. In this phase, people begin to view the intentions behind actions as more important than their consequences. For instance, if a person who is driving swerves in order to not hit a dog and then knocks over a road sign, adults are likely to be less angry at the person than if he or she had done it on purpose just for fun. Even though the outcome is the same, people are more forgiving because of the good intention of saving the dog. This phase also includes the idea that people have different morals and that morality is not necessarily universal. People in the Autonomous Phase also believe rules may be broken under certain circumstances. For instance, Rosa Parks broke the law by refusing to give up her seat on a bus, which was against the law but something many people consider moral nonetheless. In this phase, people also stop believing in

the idea of immanent justice.

Kohlberg's Theory of Moral Development

Psychologist Lawrence Kohlberg (1927–1987) extended upon the foundation that Piaget built regarding moral and cognitive development. Kohlberg, like Piaget, was interested in moral reasoning. Moral reasoning does not necessarily equate to moral behavior. Holding a particular belief does not mean that our behavior will always be consistent with the belief. To develop this theory, Kohlberg posed moral dilemmas to people of all ages, and then he analyzed their answers to find evidence of their particular stage of moral development. After presenting people with this and various dilemmas, Kohlberg reviewed people's responses and placed them in different stages of moral reasoning. According to Kohlberg, an individual progresses from the capacity for pre-conventional morality (before age 9) to the capacity for conventional morality (early adolescence), and toward attaining post-conventional morality (once formal operational thought is attained), which only a few fully achieve.

Moral Stages According to Kohlberg

Using a stage model similar to Piaget's, Kohlberg proposed three levels, with six stages, of moral development. Individuals experience the stages universally and in sequence as they form beliefs about justice. He named the levels simply preconventional, conventional, and postconventional.

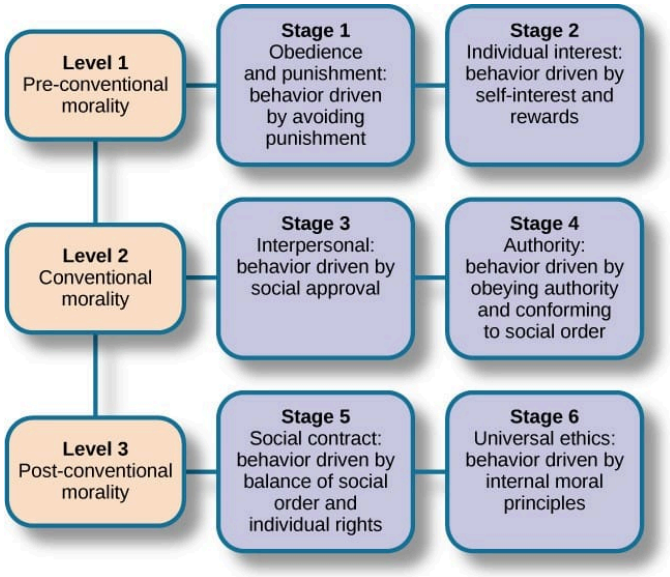


Figure 9.2.1. Kohlberg identified three levels of moral reasoning: pre-conventional, conventional, and post-conventional: Each level is associated with increasingly complex stages of moral development.

Preconventional: Obedience and Mutual Advantage

The preconventional level of moral development coincides approximately with the preschool period of life and with Piaget's preoperational period of thinking. At this age, the child is still relatively self-centered and insensitive to the moral effects of actions on others. The result is a somewhat short-sighted orientation to morality. Initially (Kohlberg's Stage 1), the child adopts an **ethics of obedience and punishment** —a sort of "morality of keeping out of trouble." The rightness and wrongness of actions are determined by whether actions are rewarded or punished by authorities, such as parents or teachers. If helping yourself to a cookie brings affectionate smiles from adults, then taking the cookie is considered morally "good." If it brings scolding instead, then it is morally "bad." The child does not think about why an action might be praised or scolded; in fact, says Kohlberg, he would be incapable, at Stage 1, of considering the reasons even if adults offered them.

Eventually, the child learns not only to respond to positive consequences but also learns how to **produce** them by exchanging favors with others. The new ability creates Stage 2, **ethics of market exchange**. At this stage, the morally "good" action is one that favors not only the child but another person directly involved. A "bad" action is one that lacks this reciprocity. If trading the

sandwich from your lunch for the cookies in your friend's lunch is mutually agreeable, then the trade is morally good; otherwise, it is not. This perspective introduces a type of fairness into the child's thinking for the first time. However, it still ignores the larger context of actions—the effects on people not present or directly involved. In Stage 2, for example, it would also be considered morally "good" to pay a classmate to do another student's homework—or even to avoid bullying—provided that both parties regard the arrangement as being fair.

Conventional: Conformity to Peers and Society

As children move into the school years, their lives expand to include a larger number and range of peers and (eventually) of the community as a whole. The change leads to **conventional morality**, which are beliefs based on what this larger array of people agree on—hence Kohlberg's use of the term "conventional." At first, in Stage 3, the child's reference group are immediate peers, so Stage 3 is sometimes called the **ethics of peer opinion**. If peers believe, for example, that it is morally good to behave politely with as many people as possible, then the child is likely to agree with the group and to regard politeness as not merely an arbitrary social convention, but a moral "good." This approach to moral belief is a bit more stable than the approach in Stage 2 because the child is taking into account the reactions not just of one other person, but of many. But it can still lead astray if the group settles on beliefs that adults consider morally wrong, like "Shoplifting for candy bars is fun and desirable."

Eventually, as the child becomes a youth and the social world expands, even more, he or she acquires even larger numbers of peers and friends. He or she is, therefore, more likely to encounter disagreements about ethical issues and beliefs. Resolving the complexities lead to Stage 4, the **ethics of law and order**, in which the young person increasingly frames moral beliefs in terms of what the majority of society believes. Now, an action is morally good if it is legal or at least customarily approved by most people, including people whom the youth does not know personally. This attitude leads to an even more stable set of principles than in the previous stage, though it is still not immune from ethical mistakes. A community or society may agree, for example, that people of a certain race should be treated with deliberate disrespect, or that a factory owner is entitled to dump wastewater into a commonly shared lake or river. To develop ethical principles that reliably avoid mistakes like these require further stages of moral development.

Postconventional: Social Contract and Universal Principles

As a person becomes able to think abstractly (or "formally," in Piaget's sense), ethical beliefs shift from acceptance of what the community **does** believe to the **process** by which community beliefs are formed. The new focus constitutes Stage 5, the **ethics of social contract**. Now an action, belief, or practice is morally good if it has been created through fair, democratic processes that respect the rights of the people affected. Consider, for example, the laws in some areas that require motorcyclists to wear helmets. In what sense are the laws about this behavior ethical? Was it created by consulting with and gaining the consent of the relevant people? Were cyclists consulted, and did they give consent? Or how about doctors or the cyclists' families? Reasonable, thoughtful individuals disagree about how thoroughly and fairly these **consultation** processes should be. In focusing on the processes by which the law was created; however, individuals are thinking according to Stage 5, the ethics of social contract, regardless of the position they take about wearing helmets. In this sense, beliefs on both sides of a debate about an issue can sometimes be morally sound, even if they contradict each other.

Paying attention to due process certainly seems like it should help to avoid mindless conformity to conventional moral beliefs. As an ethical strategy, though, it too can sometimes fail. The problem is that an ethics of social contract places more faith in the democratic process than the process sometimes deserves, and does not pay enough attention to the content of what gets decided. In principle (and occasionally in practice), a society could decide democratically to kill off every member of a racial minority, but would deciding this by due process make it ethical? The realization that ethical means can sometimes serve unethical ends leads some individuals toward Stage 6, the **ethics of self-chosen, universal principles**. At this final stage, the morally good action is based on personally held principles that apply both to the person's immediate life as well as to the larger community and society. The universal principles may include a belief in democratic due process (Stage 5 ethics), but also other principles, such as a belief in the dignity of all human life or the sacredness of the natural environment. At Stage 6, the universal principles will guide a person's beliefs even if the principles mean occasionally disagreeing with what is customary (Stage 4) or even with what is legal (Stage 5).

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 9.2.1. *Kohlberg's Six Stages of Moral Development* explains the stages of moral reasoning and applies it to an example scenario.

Kohlberg and the Heinz Dilemma

The Heinz dilemma is a frequently used example to help us understand Kohlberg's stages of moral development. How would you answer this dilemma? Kohlberg was not interested in whether you answer yes or no to the dilemma: Instead, he was interested in the reasoning behind your answer.

In Europe, a woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost him to make. He paid $200 for the radium and charged $2,000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could only get together about $1,000, which is half of what it cost. He told the druggist that his wife was dying and asked him to sell it cheaper or let him pay later. But the druggist said: "No, I discovered the drug and I'm going to make money from it." So Heinz got desperate and broke into the man's store to steal the drug for his wife. Should the husband have done that? (Kohlberg, 1969, p. 379)

From a theoretical point of view, it is not important what the participant thinks that Heinz should do. Kohlberg's theory holds that the justification the participant offers is what is significant, the form of their response. Below are some of the many examples of possible arguments that belong to the six stages:

- Stage one (obedience): Heinz should not steal the medicine because he will consequently be put in prison, which will mean he is a bad person. OR Heinz should steal the medicine because it is only worth $200 and not how much the druggist wanted for it; Heinz had even offered to pay for it and was not stealing anything else.
- Stage two (self-interest): Heinz should steal the medicine because he will be much happier if he saves his wife, even if he will have to serve a prison sentence. OR Heinz should not steal the medicine because prison is an awful place, and he would more likely languish in a jail cell than over his wife's death.
- Stage three (conformity): Heinz should steal the medicine because his wife expects it; he wants to be a good husband. OR Heinz should not steal the drug because stealing is bad, and he is not a criminal; he has tried to do everything he can without breaking the law, you cannot blame him.
- Stage four (law-and-order): Heinz should not steal the medicine because the law prohibits stealing, making it illegal. OR Heinz should steal the drug for his wife but also take the prescribed punishment for the crime as well as paying the druggist what he is owed. Criminals cannot just run around without regard for the law; actions have consequences.
- Stage five (social contract orientation): Heinz should steal the medicine because everyone has a right to choose life, regardless of the law. OR Heinz should not steal the medicine because the scientist has a right to fair compensation. Even if his wife is sick, it does not make his actions right.
- Stage six (universal human ethics): Heinz should steal the medicine because saving a human life is a more fundamental value than the property rights of another person. OR Heinz should not steal the medicine because others may need medicine just as badly, and their lives are equally significant.

Think It Over

Consider your decision-making processes. What guides your decisions? Are you primarily concerned with your personal well-being? Do you make choices based on what other people will think about your decision? Or are you guided by other principles? To what extent is this approach guided by your culture?

Candela Citations

CC licensed content, Original

- Theories of Moral Development. **Authored by**: Nicole Arduini-Van Hoose. **Retrieved from**: https://courses.lumenlearning.com/ad...l-development/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Piaget's Theory of Moral Development. **Provided by**: Psychology Wiki. **Retrieved from**: https://psychology.wikia.org/wiki/Pi...al_development. **License**: CC BY-SA: Attribution-ShareAlike
- Moral Development. **Authored by**: Stephanie Loalada. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...l-development/. **License**: CC BY-SA: Attribution-ShareAlike
- Educational Psychology. **Authored by**: Kelvin Seifert and Rosemary Sutton. **Provided by**: The Saylor Foundation . **Retrieved from**: https://resources.saylor.org/wwwreso...Psychology.pdf. **License**: CC BY: Attribution
- Psychology. **Provided by**: Open Stax. **Retrieved from**: https://cnx.org/contents/Sr8Ev5Og@12...espan-Theories. **License**: CC BY: Attribution

All rights reserved content

- Kohlberg's Six Stages of Moral Development. **Provided by**: Sprouts. **Retrieved from**: https://youtu.be/bounwXLkme4. **License**: All Rights Reserved

This page titled 9.1: Theories of Moral Development is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

9.2: Modern Views of Moral Development

Kohlberg continued to explore his theory after he published his research. He postulated that there could be other stages and that there could be transitions into each stage. One thing that Kohlberg never fully addressed was his use of nearly all-male samples. Men and women tend to have very different styles of moral decision making; men tend to be very justice-oriented, while women tend to be more compassion oriented. In terms of Kohlberg's stages, women tend to be in lower stages than men because of their compassion orientation.

Carol Gilligan was one of Kohlberg's research assistants. She believed that Kohlberg's theory was inherently biased against women. Gilligan suggests that the biggest reason that there is a gender bias in Kohlberg's theory is that males tend to focus on logic and rules. In contrast, women focus on caring for others and relationships. She suggests, then, that in order to truly measure women's moral development, it was necessary to create a measure specifically for women. Gilligan was clear that she did not believe neither male nor female moral development was better, but rather that they were equally important.

Gilligan's Morality of Care

As logical as they sound, Kohlberg's stages of moral justice are not sufficient for understanding the development of moral beliefs. To see why, suppose that you have a student who asks for an extension of the deadline for an assignment. The justice orientation of Kohlberg's theory would prompt you to consider issues of whether granting the request is fair. Would the late student be able to put more effort into the assignment than other students? Would the extension place a difficult demand on you, since you would have less time to mark the assignments? These are important considerations related to the rights of the students and the teacher. In addition to these, however, are considerations having to do with the responsibilities that you and the requesting student have for each other and others. Does the student have a valid personal reason (illness, death in the family, etc.) for the assignment being late? Will the assignment lose its educational value if the student has to turn it in prematurely? These latter questions have less to do with fairness and rights and more to do with taking care of and responsibility for students. They require a framework different from Kohlberg's to be understood fully.

One such framework has been developed by Carol Gilligan, whose ideas center on a **morality of care**, or system of beliefs about human responsibilities, care, and consideration for others. Gilligan proposed three moral positions that represent different extents or breadth of ethical care. Unlike Kohlberg or Piaget, she does not claim that the positions form a strictly developmental sequence, but only that they can be ranked hierarchically according to their depth or subtlety. In this respect, her theory is "semi-developmental" in a way similar to Maslow's theory of motivation (Brown & Gilligan, 1992; Taylor, Gilligan, & Sullivan, 1995). Table 9.1 summarizes the three moral positions from Gilligan's theory.

Table 9.3.1. Positions of moral development according to Gilligan

Moral position	Definition of what is morally good
Position 1: Survival orientation	Action that considers one's personal needs only
Position 2: Conventional care	Action that considers others' needs or preferences, but not one's own
Position 3: Integrated care	Action that attempts to coordinate one's own personal needs with those of others

Position 1: Caring as Survival

The most basic kind of caring is a **survival orientation**, in which a person is concerned primarily with his or her welfare. If a teenage girl with this ethical position is wondering whether to get an abortion, for example, she will be concerned entirely with the effects of the abortion on herself. The morally good choice will be whatever creates the least stress for herself, and that disrupts her own life the least. Responsibilities to others (the baby, the father, or her family) play little or no part in her thinking.

As a moral position, a survival orientation is obviously not satisfactory for classrooms on a widespread scale. If every student only looked out for himself or herself, classroom life might become rather unpleasant! Nonetheless, there are situations in which focusing primarily on yourself is both a sign of good mental health and relevant to teachers. For a child who has been bullied at school or sexually abused at home, for example, it is both healthy and morally desirable to speak out about how bullying or abuse has affected the victim. Doing so means essentially looking out for the victim's own needs at the expense of others' needs,

including the bully's or abuser's. Speaking out, in this case, requires a survival orientation and is healthy because the child is taking care of herself.

Position 2: Conventional Caring

A more subtle moral position is **caring for others**, in which a person is concerned about others' happiness and welfare, and about reconciling or integrating others' needs where they conflict with each other. In considering an abortion, for example, the teenager at this position would think primarily about what other people prefer. Do the father, her parents, and/or her doctor want her to keep the child? The morally good choice becomes whatever will please others the best. This position is more demanding than Position 1, ethically, and intellectually, because it requires coordinating several persons' needs and values. Nevertheless, it is often morally insufficient because it ignores one crucial person: the self.

In classrooms, students who operate from Position 2 can be very desirable in some ways; they can be eager to please, considerate, and good at fitting in and at working cooperatively with others. Because these qualities are usually welcome in a busy classroom, teachers can be tempted to reward students for developing and using them. The problem with rewarding Position 2 ethics, however, is that doing so neglects the student's development—his or her own academic and personal goals or values. Sooner or later, personal goals, values, and identity need attention and care, and educators have a responsibility for assisting students in discovering and clarifying them.

Position 3: Integrated Caring

The most developed form of moral caring in Gilligan's model is **integrated caring**, the coordination of personal needs and values with those of others. Now the morally good choice takes account of everyone, *including* yourself, not everyone *except* yourself. In considering an abortion, a woman at Position 3 would think not only about the consequences for the father, the unborn child, and her family but also about the consequences for herself. How would bearing a child affect her own needs, values, and plans? This perspective leads to moral beliefs that are more comprehensive but ironically are also more prone to dilemmas because the widest possible range of individuals is being considered.

In classrooms, integrated caring is most likely to surface whenever teachers give students wide, sustained freedom to make choices. If students have little flexibility in their actions, there is little room for considering *anyone's* needs or values, whether their own or others'. If the teacher says simply: "Do the homework on page 50 and turn it in tomorrow morning," then the main issue becomes compliance, not a moral choice. Suppose instead that she says something like this: "Over the next two months, figure out an inquiry project about the use of water resources in our town. Organize it any way you want—talk to people, read widely about it, and share it with the class in a way that all of us, including yourself, will find meaningful." An assignment like this poses moral challenges that are not only educational but also moral since it requires students to make value judgments. Why? For one thing, students must decide what aspect of the topic matters to them. Such a decision is partly a matter of personal values. For another thing, students have to consider how to make the topic meaningful or important to *others* in the class. Third, because the timeline for completion is relatively far in the future, students may have to weigh personal priorities (like spending time with friends or family) against educational priorities (working on the assignment a bit more on the weekend). As you might suspect, some students might have trouble making good choices when given this sort of freedom—and their teachers might, therefore, be cautious about giving such an assignment. Nevertheless, the difficulties in making choices are part of Gilligan's point: integrated caring is indeed more demanding than the caring based only on survival or on consideration of others. Not all students may be ready for it.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 9.3.1. *Carol Gilligan's Theory of Moral Development* explains the difference in moral development from the care perspective that females often take in society.

Try It

https://assessments.lumenlearning.co...essments/16616

Candela Citations

CC licensed content, Original

- Modern Views of Moral Development. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...l-development/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Moral Development. **Authored by**: Stephanie Loalada. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...l-development/. **License**: CC BY-SA: Attribution-ShareAlike

All rights reserved content

- Carol Gilligan's Theory of Moral Development. **Retrieved from**: https://youtu.be/HctzZwwueL4. **License**: All Rights Reserved

This page titled 9.2: Modern Views of Moral Development is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

9.3: Influences on Moral Development

Like most aspects of development, influencing factors are multifaceted. Moral development is strongly influenced by interpersonal factors, such as family, peers, and culture. Intrapersonal factors also impact moral development, such as cognitive changes, emotions, and even neurodevelopment.

Interpersonal Influences

Children's interactions with caregivers and peers have been shown to influence their development of moral understanding and behavior. Researchers have addressed the influence of interpersonal interactions on children's moral development from two primary perspectives: socialization/internalization (Grusec & Goodnow, 1994; Kochanska & Askan, 1995; Kochanska, Askan, & Koenig, 1995) and social domain theory (Turiel, 1983; Smetana 2006). Research from the social domain theory perspective focuses on how children actively distinguish moral from conventional behavior based in part based on the responses of parents, teachers, and peers (Smetana, 1997). Adults tend to respond to children's moral transgressions (e.g., hitting or stealing) by drawing the child's attention to the effect of his or her action on others and doing so consistently across various contexts.

In contrast, adults are more likely to respond to children's conventional misdeeds (e.g., wearing a hat in the classroom, eating spaghetti with fingers) by reminding children about specific rules and doing so only in certain contexts (e.g., at school but not at home) (Smetana, 1984; 1985). Peers respond mainly to moral but not conventional transgressions and demonstrate emotional distress (e.g., crying or yelling) when they are the victim of moral but not conventional transgressions (Smetana, 1984). Children then use these different cues to help determine whether behaviors are morally or conventionally wrong.

Research from a socialization/internalization perspective focuses on how adults pass down standards of behavior to children through parenting techniques and why children do or do not internalize those values (Grusec & Goodnow, 1994; Kochanska & Askan, 1995). From this perspective, moral development involves children's increasing compliance with and internalization of adult rules, requests, and standards of behavior. Using these definitions, researchers find that parenting behaviors vary in the extent to which they encourage children's internalization of values and that these effects depend partially on child attributes, such as age and temperament (Grusec & Goodnow, 1994). For instance, Kochanska (1997) showed that gentle parental discipline best promotes conscience development in temperamentally fearful children. However, the same parental responsiveness and a mutually responsive parent-child orientation best promote conscience development in temperamentally fearless children. These parental influences exert their effects through multiple pathways, including increasing children's experience of moral emotions (e.g., guilt, empathy) and their self-identification as moral individuals (Kochanska, 2010).

Moral Development in the Family

In the formation of children's morals, no outside influence is greater than that of the family. Through punishment, reinforcement, and both direct and indirect teaching, families instill morals in children and help them to develop beliefs that reflect the values of their culture. Although families' contributions to children's moral development are broad, there are particular ways in which morals are most effectively conveyed and learned.

Justice

Families establish rules for right and wrong behavior, which are maintained through positive reinforcement and punishment. Positive reinforcement is the reward for good behavior and helps children learn that certain actions are encouraged above others. Punishment, by contrast, helps to deter children from engaging in bad behaviors, and from an early age helps children to understand that actions have consequences. This system additionally helps children to make decisions about how to act, as they begin to consider the outcomes of their behavior.

Fairness

The notion of what is fair is one of the central moral lessons that children learn in the family context. Families set boundaries on the distribution of resources, such as food and living spaces, and allow members different privileges based on age, gender, and employment. The way in which a family determines what is fair affects children's development of ideas about rights and

entitlements, and also influences their notions of sharing, reciprocity, and respect.

Personal Balance

Through understanding principles of fairness, justice, and social responsibilities, children learn to find a balance between their own needs and wants and the interests of the greater social environment. By placing limits on their desires, children benefit from a greater sense of love, security, and shared identity. At the same time, this connectedness helps children to refine their own moral system by providing them with a reference for understanding right and wrong.

Social Roles

In the family environment, children come to consider their actions not only in terms of justice but also in terms of emotional needs. Children learn the value of social support from their families and develop motivations based on kindness, generosity, and empathy, rather than on only personal needs and desires. By learning to care for the interests and well-being of their family, children develop concern for society as a whole.

Morality and Culture

The role of culture on moral development is an important topic that raises fundamental questions about what is universal and what is culturally specific regarding morality and moral development. Many research traditions have examined this question, with social-cognitive and structural-developmental positions theorizing that morality has a universal requirement to it, drawing from moral philosophy. The expectation is that if morality exists, it has to do with those values that are generalizable across groups and cultures. Alternatively, relativistic cultural positions have been put forth mostly by socialization theories that focus on how cultures transmit values rather than what values are applied across groups and individuals.

As an example of some of the debates, Shweder, Mahapatra, and Miller (1987) argued for moral relativism or the notion that different cultures defined the boundaries of morality differently. In contrast, Turiel and Perkins (2004) argued for the universality of morality, focusing largely on evidence throughout the history of resistance movements that fight for justice through the affirmation of individual self-determination rights. In an update on the debate between moral relativism and moral universality, Miller (2006) provides a thoughtful review of the cultural variability of moral priorities. Miller argues that rather than variability in what individuals consider moral (fairness, justice, rights), there is cultural variability in the priority given to moral considerations (e.g., the importance of prosocial helping). Wainryb (2006), in contrast, reviews extensive literature that has demonstrated that children in diverse cultures such as the U.S., India, China, Turkey, and Brazil share a pervasive view about upholding fairness and the wrongfulness of inflicting harm on others. Cultures vary in terms of conventions and customs, but not principles of fairness, which appear to emerge very early in development, before socialization influences. Wainryb (1991; 1993) shows that many apparent cultural differences in moral judgments are actually due to different informational assumptions or beliefs about the way the world works. When people hold different beliefs about the effects of actions or the status of different groups of people, their judgments about the harmfulness or fairness of behaviors often differ, even when they are applying the same moral principles.

Another powerful socializing mechanism by which values are transmitted is religion, which is for many inextricably linked to cultural identity. Nucci and Turiel (1993) assessed individuals' reactions to dictates from God, and the distinctions in their reactions to God's moral (e.g., stealing) and conventional (e.g., day of worship) dictates. One explicit manner in which societies can socialize individuals is through moral education. Solomon and colleagues (1988) present evidence from a study that integrated both direct instruction and guided reflection approaches to moral development, with evidence for resultant increases in spontaneous prosocial behavior. Finally, studies of moral development and cultural issues cover many subtopics. For instance, a recent review of studies examining social exclusion identifies cultural similarities in the evaluation of exclusion across a range of societies and cultures (Hitti, Mulvey & Killen, 2011).

Intrapersonal Influences

Moral questions tend to be emotionally charged issues that evoke strong affective responses. Consequently, emotions likely play an important role in moral development. However, there is currently little consensus among theorists on how emotions influence moral development. Psychoanalytic theory, founded by Freud, emphasizes the role of guilt in repressing primal drives. Research on prosocial behavior has focused on how emotions motivate individuals to engage in moral or altruistic acts. Social-cognitive development theories have recently begun to examine how emotions influence moral judgments. Intuitionist theorists assert that moral judgments can be reduced to immediate, instinctive emotional responses elicited by moral dilemmas.

Research on socioemotional development and prosocial development has identified several “moral emotions,” which are believed to motivate moral behavior and influence moral development (Eisenberg, 2000, for a review). The primary emotions consistently linked with moral development are guilt, shame, empathy, and sympathy. Guilt has been defined as “an agitation-based emotion or painful feeling of regret that is aroused when the actor causes, anticipates causing or is associated with an aversive event” (Fergusen & Stegge, 1998). Shame is often used synonymously with guilt but implies a more passive and dejected response to a perceived wrong. Guilt and shame are considered “self-conscious” emotions because they are of primary importance to an individual’s self-evaluation.

In contrast to guilt and shame, empathy and sympathy are considered other-oriented moral emotions. Empathy is commonly defined as an affective response produced by the apprehension or comprehension of another’s emotional state, which mirrors the other’s affective state. Similarly, sympathy is defined as an emotional response produced by the apprehension or comprehension of another’s emotional state, which does not mirror the other’s affect but instead causes one to express concern or sorrow for the other (Eisenberg, 2000).

The relation between moral action and moral emotions has been extensively researched. Very young children have been found to express feelings of care, and empathy towards others, showing concerns for other’s well being (Eisenberg, Spinard, & Sadovsky, 2006). Research has consistently demonstrated that when empathy is induced in an individual, he or she is more likely to engage in subsequent prosocial behavior (Batson 1998; Eisenberg, 200 for review). Additionally, other research has examined emotions of shame and guilt concerning children’s emphatic and prosocial behavior (Zahn-Waxler & Robinson, 1995).

While emotions serve as information for children in their interpretations about the moral consequences of acts, the role of emotions in children’s moral judgments has only recently been investigated. Some approaches to studying emotions in moral judgments come from the perspective that emotions are automatic intuitions that define morality (Greene, 2001; Haidt, 2001). Other approaches emphasize the role of emotions as evaluative feedback that help children interpret acts and consequences (Turiel & Killen, 2010). Research has shown that children attribute different emotional outcomes to actors involved in moral transgressions than those involved in conventional transgressions (Arsenio, 1988; Arsenio & Fleiss, 1996). Emotions may help individuals prioritize among different information and possibilities and reduce information processing demands in order to narrow the scope of the reasoning process (Lemerise & Arsenio, 2000). In addition, Malti, Gummerum, Keller, and Buchmann (2009), found individual differences in how children attribute emotions to victims and victimizers.

Link To Learning

Parenting has the largest impact on adolescent moral development. Read more here in this article, “Building Character: Moral Development in Adolescence” from the Center for Parent and Teen Communication.

Candela Citations

CC licensed content, Original

- Influences on Moral Development. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...l-development/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Moral Development During Adolescence . **Authored by**: Tera Jones. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...g-adolescence/. **License**: CC BY: Attribution
- Moral Development. **Provided by**: Psychology Wiki. **Retrieved from**: https://psychology.wikia.org/wiki/Moral_development. **License**: CC BY-SA: Attribution-ShareAlike

This page titled 9.3: Influences on Moral Development is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

9.4: Moral Reasoning in Adolescence



As adolescents become increasingly independent, they also develop more nuanced thinking about morality, or what is right or wrong. As adolescents' cognitive, emotional, and social development continue to mature, their understanding of morality expands, and their behavior becomes more closely aligned with their values and beliefs. Therefore, moral development describes the evolution of these guiding principles and is demonstrated by the ability to apply these guidelines in daily life. Understanding moral development is important in this stage, where individuals make so many important decisions and gain more and more legal responsibility.

Adolescents are receptive to their culture, to the models they see at home, in school, and in the mass media. These observations influence moral reasoning and moral behavior. When children are younger, their family, culture, and religion greatly influence their moral decision-making. During the early adolescent period, peers have a much greater influence. Peer pressure can exert a powerful influence because friends play a more significant role in teens' lives.

Furthermore, the new ability to think abstractly enables youth to recognize that rules are simply created by other people. As a result, teens begin to question the absolute authority of parents, schools, government, and other traditional institutions (Vera-Estay, Dooley, & Beauchamp, 2014). By late adolescence, most teens are less rebellious as they have begun to establish their own identity, their own belief system, and their place in the world.

Unfortunately, some adolescents have life experiences that may interfere with their moral development. Traumatic experiences may cause them to view the world as unjust and unfair. Additionally, social learning also impacts moral development. Adolescents may have observed the adults in their lives, making immoral decisions that disregarded the rights and welfare of others, leading these youth to develop beliefs and values that are contrary to the rest of society. That being said, adults have opportunities to support moral development by modeling the moral character that we want to see in our children. Parents are particularly important because they are generally the original source of moral guidance. Authoritative parenting facilitates children's moral growth better than other parenting styles, and one of the most influential things a parent can do is to encourage the right kind of peer relations (McDevitt & Ormrod, 2004). While parents may find this process of moral development difficult or challenging, it is important to remember that this developmental step is essential to their children's well-being and ultimate success in life.

As mentioned previously, Lawrence Kohlberg (1984) argued that moral development moves through a series of stages, and reasoning about morality becomes increasingly complex (somewhat in line with increasing cognitive skills, as per Piaget's stages of cognitive development). In early adolescence, young people begin to care about how situational outcomes impact others and want to please and be accepted (conventional morality). At this developmental phase, people are able to value the good that can be derived from holding to social norms in the form of laws or less formalized rules. From adolescence and beyond, adolescents begin to employ abstract reasoning to justify behaviors. Moral behavior is based on self-chosen ethical principles that are generally comprehensive and universal, such as justice, dignity, and equality, which is postconventional morality.

Forming a Sense of Rights and Responsibilities

When it comes to schooling and teaching, moral choices are not restricted to occasional dramatic incidents but are woven into almost every aspect of classroom life. Imagine this simple example. Suppose that you are teaching, reading to a small group of

second-graders, and the students are taking turns reading a story out loud. Should you give every student the same amount of time to read, even though some might benefit from having additional time? Or should you give more time to the students who need extra help, even if doing so bores classmates and deprives others of equal shares of "floor time"? Which option is fairer, and which is more considerate? Simple dilemmas like this happen every day at all grade levels simply because students are diverse, and because class time and a teacher's energy are finite.

Embedded in this rather ordinary example are moral themes about fairness or justice, on the one hand, and about consideration or care on the other. It is important to keep both themes in mind when thinking about how students develop beliefs about right or wrong. A **morality of justice** is about human rights—or, more specifically, about respect for fairness, impartiality, equality, and individuals' independence. A **morality of care**, on the other hand, is about human responsibilities—more specifically, about caring for others, showing consideration for individuals' needs, and interdependence among individuals. Students and teachers need both forms of morality. In the next sections, therefore, we explain a major example of each type of developmental theory, beginning with the morality of justice.

Character Development: Integrating Ethical Understanding, Care, and Action

The theories described so far all offer frameworks for understanding how children grow into youth and adults. Those by Maslow, Kohlberg, and Gilligan are more specific than the one by Erikson in that they focus on the development of understanding about ethics. From a teacher's point of view, though, the theories are all limited in two ways. One problem is that they focus primarily on cognition—on what children *think* about ethical issues—more than on emotions and actions. The other is that they say little about how to encourage ethical development. Encouragement is part of teachers' jobs, and doing it well requires understanding not only what students know about ethics, but also how they feel about it and what ethical actions they are prepared to take.

Many educators have recognized the need for children to be guided in the development of ethics and morals, and a number of them have, therefore, developed practical programs that integrate ethical understanding, care, and action. As a group, the programs are often called **character education**. However, individual programs have a variety of specific names (for example, moral dilemma education, integrative ethical education, social competence education, and many more). Details of the programs vary, but they all combine a focus on ethical knowledge with attention to ethical feelings and actions (Elkind & Sweet, 2004; Berkowitz & Bier, 2006; Narvaez, 2010). Character education programs go well beyond just teaching students to obey ethical rules, such as "Always tell the whole truth" or "Always do what the teacher tells you to do." Such rules require very little thinking on the part of the student, and there are usually occasions in which a rule that is supposedly universal needs to be modified, "bent," or even disobeyed. (For example, if telling the whole truth might hurt someone's feelings, it might sometimes be more considerate—and thus more ethical—to soften the truth a bit, or even to say nothing at all.)

Instead, character education is about inviting students to think about the broad questions of his or her life, such as "What kind of person should I be?" or "How should I live my life?" Thoughtful answers to such broad questions help to answer a host of more specific questions that have ethical implications. For example, "Should I listen to the teacher right now, even if she is a bit boring, or just tune out?" or "Should I offer to help my friend with the homework she is struggling with, or hold back, so that learns to do it herself?" Most of the time, there is not enough time to reason about questions like these deliberately or consciously. Responses have to become intuitive, automatic and **embodied** —meaning that they have to be based on fairly immediate emotional responses (Narvaez, 2009). The goal of character education is to develop students' capacities to respond to daily ethical choices not only consciously and cognitively, but also intuitively and emotionally. To the extent that this goal is met, students can indeed live a good, ethically responsible life.

Schoolwide Programs of Character Education

In the most comprehensive approaches to character education, an entire school commits itself to develop students' ethical character, despite the immense diversity among students (Minow, Schweder, & Markus, 2008). All members of the staff—not just teachers and administrators, but also custodians and educational assistants—focus on developing positive relationships with students. The underlying theme that develops is one of cooperation and mutual care, not competition. Fairness, respect, and honesty pervade class and school activities; discipline, for example, focuses on solving conflicts between students and between students and teachers, rather than on rewarding obedience or punishing wrong-doers. The approach requires significant reliance on democratic meetings and discussions, both in classrooms and wherever else groups work together in school.

Building a Culture of Kindness

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 9.5.1. *Building a Culture of Kindness* with a Day of Services discusses ways that schools are building character education into their programs and the impact it is having on students.

Classroom Programs of Character Education

Even if a teacher is teaching character education simply within her classroom, there are many strategies available. The goal, in this case, is to establish the classroom as a place where everyone feels included, and where everyone treats everyone else with civility and respect. Conflicts and disagreements may still occur, but in a caring community, they can be resolved without undue anger or hostility. Here are a few ways to work toward this sort of classroom:

- Use class meetings to decide on as many important matters as possible—such as the expected rules of behavior, important classroom activities, or ongoing disagreements.
- Try arranging for students to collaborate on significant projects and tasks.
- Arrange a "Buddies" program in which students of different grade levels work together on a significant task. Older students can sometimes assist younger students by reading to them, by listening to them read, or both. If an older student is having trouble with reading himself or herself, furthermore, a reading buddies program can sometimes also be helpful to the older student.
- Familiarize students with conflict resolution strategies and practice using them when needed.
- Many areas of curriculum lend themselves to discussions about ethical issues. Obvious examples are certain novels, short stories, and historical events. However, ethical issues lurk elsewhere as well. Teaching nutrition, for example, can raise issues about the humane treatment of animals that will be slaughtered for food, and about the ethical acceptability of using a large number of grains to feed animals even though many people in the world do not have enough to eat.
- Service learning projects can be very helpful in highlighting issues of social justice. Planning, working at, and reflecting about a local soup kitchen, tutoring students from low-income families, performing simple repairs on homes in need: projects like these broaden knowledge of society and the needs of its citizens.

Candela Citations

CC licensed content, Original

- Moral Reasoning in Adolescence . **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...n-adolescence/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Moral Development During Adolescence . **Authored by**: Tera Jones. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...g-adolescence/. **License**: CC BY: Attribution
- Educational Psychology. **Authored by**: Kelvin Seifert and Rosemary Sutton. . **Provided by**: The Saylor Foundation. **Retrieved from**: https://resources.saylor.org/wwwreso...Psychology.pdf. **License**: CC BY: Attribution

All rights reserved content

- Building a Culture of Kindness with a Day of Services. **Provided by**: Edutopia. **Retrieved from**: https://youtu.be/QsVpdaZ5W-0. **License**: All Rights Reserved

This page titled 9.4: Moral Reasoning in Adolescence is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

conventional moral development: stages 3 and 4 of moral development where morality is internalized, and the concern is on society norms

pre-conventional moral development: first 2 stages of moral development where morality comes from outside the person, and the concern is on physical consequences of actions

post-conventional moral development: stages 5 and 6 of moral development where morality comes from personal understanding of rights and justice, regardless of whether that understanding matches societal norms

This page titled 9.5: Glossary is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

10: CHANGING FAMILY RELATIONSHIPS

Learning Objectives

- Examine changes in family relationships during adolescence
- Identify the three key components of good parenting
- Describe the impact of different parenting styles on children's development
- Examine short-term and long-term consequences of non-traditional family structures
- Describe issues regarding abuse and neglect
- Examine concerns about childhood stress and trauma

As adolescents work to form their identities, they pull away from their parents, and the peer group becomes very important (Shanahan, McHale, Osgood, & Crouter, 2007). Despite spending less time with their parents, most teens report positive feelings toward them (Moore, Guzman, Hair, Lippman, & Garrett, 2004). Warm and healthy parent-child relationships have been associated with positive child outcomes, such as better grades and fewer school behavior problems, in the United States as well as in other countries (Hair et al., 2005).

Although peers take on greater importance during adolescence, family relationships remain essential too. One of the fundamental changes during adolescence involves a renegotiation of parent-child relationships. As adolescents strive for more independence and autonomy during this time, different aspects of parenting become more salient.

In this chapter, we will explore the changing relationship between adolescents and their families. We will consider the key components of effective parenting and how to implement them with teenagers. We will discuss the impact of child maltreatment on the developing teen. Finally, we will review other family dynamics that may impact development.

10.1: Key Components of Good Parenting
10.2: Family Life
10.3: Child Maltreatment
10.4: Stress and Development
10.5: Glossary

This page titled 10: Changing Family Relationships is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

10.1: Key Components of Good Parenting

While the relationships between adolescents and their parents are changing, parents still have a tremendous influence on their child's behavior. Research into which parenting behaviors tend to be critical components of good parenting has revealed connection, appropriate autonomy, and parental regulation to be fundamental (Barber, 1997).

Connection

Parents often become less involved in the lives of their children as they enter the middle grades. However, adolescents still need to maintain a positive connection with their caregivers. Parents maintain connections with their teens by showing love and positive affect, listening and demonstrating empathetic understanding, building trust, showing acceptance, and giving approval. A good relationship with caring adults is one of the best safeguards an adolescent has as they develop.

There are a great variety of attitudes, opinions, and values, which can affect how parents choose to raise their children. Across these differences, however, research has shown that being effective parents involves the following qualities:

- **Show love.** Adolescents need adults who are there for them—people who connect with them, communicate with them, spend time with them, and show a genuine interest in them. This attention is how they learn to care for and love others.
- **Listen.** To listen means to avoid interrupting and it means to pay close attention. Listening is best done in a quiet place with no distractions. It is hard to listen carefully if the parent is also trying to cook dinner or watch television. Often just talking with children about a problem or an issue helps to clarify things. Sometimes the less advice that the parents offer, the more teens may ask for it. Listening can also be the best way to uncover a more serious problem that requires attention.
- **Provide support.** Adolescents need support as they struggle with problems that may seem unimportant to their parents and families. They need praise when they have done their best. They need encouragement to develop interests and personal characteristics.
- **Show respect.** Adolescents can be difficult, rebellious, outrageous, and even mean-spirted. Despite this, teens need to be treated with respect. Modeling respect teaches adolescents appropriate behavior and reinforces unconditional love—parents may not always love their child's behavior, but they always love their child. Parents can demonstrate respect by recognizing and appreciating their teen's differences and treating them as an individual. Respect also requires compassion and empathy. Try to see things from their point of view and to consider their needs and feelings.
- **Talk over differences**. Communication breaks down for some parents because they find it hard to manage differences with their child. Differences of opinion are easier to manage when we recognize that these differences can provide meaningful opportunities for us to rethink our positions and to negotiate, a skill that is valuable for adolescents to develop. When differences arise, parents should communicate concerns firmly but calmly and explain their position to help their teen understand the reasoning. Responding too strongly can lead to yelling and screaming, and it can shut down the conversation. At a time when they are already judging themselves critically, adolescents make themselves vulnerable when they open up to their parents. We know that the best way to encourage a behavior is to reward it. If parents are critical when their teenager talks to them, what the teen learns is that their openness gets punished rather than rewarded.
- **Be a role model.** Adolescents need strong role models. Adults should live the behavior and values that they hope their child will develop. When parents set high standards for themself and treat others with kindness and respect, the child stands a better chance of following their example. As adolescents explore possibilities of who they may become, they look to their parents, peers, well-known personalities, and others to define who they may become.

Autonomy

Emotional autonomy is a psychological separation from one's caregivers. It includes a progressive decrease in dependency on their caregivers, individualization, parental de-idealization, and perceiving one's parents as people (Steinberg & Silberberg, 1986). Despite previous thinking, this is not meant to be the 'storm and stress' of adolescent detachment from their family; instead, it is a peaceful process of becoming an individual. Teens are not detaching from their caregivers, but changing their childhood perceptions and dependencies on them. Adolescents will de-idolize their parents and thinking of them more as people.

While the process of developing emotional autonomy is a normal one that usually adaptive in the long-run, it can be distressing at the time. Teens may be experiencing a loss as they lose these childhood conceptualizations of the parents (Hill & Holmbeck, 1986). However, in the end, this emotional distance will allow adolescents to rely more on themselves and develop independence.

Behavioral autonomy, also called decisional autonomy, is the ability to make decisions about one's behavior (Bosma et al., 1996). Emotional autonomy and behavioral autonomy are highly correlated. As teens become more emotionally autonomous, they desire to make more of their own decisions. With maturation comes increased emotional and behavioral autonomy. However, too much behavioral autonomy too early has been associated with poor adjustment in young teens. Behavioral autonomy in early adolescence has been found to result in higher risk for deviance and poor academic performance (Beyers & Goossens, 1999). Often, parents wonder how much autonomy to allow their teen and at what age.

How Much Independence and When?

Some parents allow too much of the wrong kind of freedom, or they offer freedom before the adolescent is ready to accept it. Other parents cling too tightly, denying young teens both the responsibilities they require to develop maturity and the opportunities they need to make choices and accept their consequences.

Research tells us that adolescents do best when they remain closely connected to their parents but at the same time are allowed to have their own points of view and even to disagree with their parents. Here are some tips to help balance closeness and independence:

- **Set limits**. All children sometimes resist limits, but they want them, and they need them. In a world that can seem too hectic for adults and adolescents alike, limits provide security. Often, adolescents whose parents do not set limits feel unloved. Setting limits is most effective when it begins early. It is harder, but not impossible, to establish limits during early adolescence.
- **Be clear**. Most teens respond best to specific instructions, which are repeated regularly. Do not give vague requests, like, "I want your room clean." Instead, be specific about what is expected and when.
- **Give reasonable choices**. Choices make teens more open to guidance. For example, establishing the rule that homework must be done before bed, but allowing the teen to decide when they will do it. Alternatively, when denying a teen something that they want to do, suggest an acceptable alternative choice.
- **Be open to negotiation**. As adolescents get older, rules may become more flexible and open to negotiation. Listen to teens' concerns when discussing chores, curfews, access to the car, and other rules and privileges. By discussing guidelines with teens, parents can foster their child's ability to think independently, compromise, and negotiate agreements—all-important life skills.
- **Grant independence in stages**. The more mature and responsible a teen's behavior is, the more privileges parents can grant. For example, allow a young teen to pick out new sneakers within a specific price range. Later, teens may be able to manage their school clothes shopping with a given budget, but the parent will approve purchases before removing the tags. Eventually, teens can manage their clothing allowance without supervision.
- **Health and safety come first**. A crucial responsibility as a parent is to protect their child's health and safety. The child needs to know that it is love for them that requires parents to veto activities and choices that threaten either of these. Let the child know what things threaten her health and safety—and often the health and safety of others—and be firm. This decision may be an area of disagreement, as adolescents often believe that nothing bad will happen to them. At the same time that they feel that everything they experience is new and unique (see Elkind's Personal Fable).
- **Say no to choices that cut off future options**. Choose battles carefully. Not all things are worth an argument. Too many battles may desensitize teens to when parents must insist that the answer is "No," such as health and safety issues, or when the choice can cut off future options for them. Teens may have a growing sense of the future, but they still lack the experiences required to fully understand how a decision they make today can affect them tomorrow. Talk to teens about the lifelong consequences of the choices they make. Help them understand there are good and bad decisions and that knowing one from the other can make all the difference in their lives.
- **Guide, but resist the temptation to control**. It is important to strike the right balance between laying down the law and allowing too much freedom. With most teens, it is easiest to maintain this balance by guiding but not controlling. Teens need opportunities to explore different roles, try on new personalities, and experiment. They need to learn that choices have consequences. That means making some mistakes and accepting the results. Nevertheless, parents need to provide guidance so that teens avoid making too many poor choices. Parents can guide by being a good listener and by asking questions that help the teen to think about the results of her actions. The fine line between guiding and controlling may be different for different children. Some children, whether they are 7 or 17, need firmer guidance and fewer privileges than do other children at the same age.
- **Let kids make mistakes.** We want our children to grow into adults who can solve problems and make good choices. These abilities are a critical part of being independent. To develop these abilities, however, teens, on occasion, need to fail, provided the stakes are not too high, and no one's health or safety is at risk. Making mistakes also allows teens to learn one critical skill—how to bounce back. It is hard for a child to learn how to pick himself up and start over if his parents always rescue him from difficulties.

- **Make actions have consequences.** Consequences are a result of choices and how people evaluate their choices and decision-making processes. Parents can help children learn to follow the rules, respect authority, and understand good decision-making by providing consequences. If a consequence is threatened or expected, it is critical to follow through. When adults do not follow through on consequences, they lose credibility with the child. However, the punishment should fit the crime. Overly punitive consequences may undermine the lesson that the parents hoped to teach because the child focuses on the consequence more than their behavior.

Despite what we often hear and read, adolescents look to their parents first and foremost in shaping their lives. When it comes to morals and ethics, political beliefs, and religion, teenagers almost always have more in common with their parents than their parents believe. Parents should look beyond the surface, beyond the specific behaviors to who the teen is becoming. Teenagers may want to dye her hair purple and pierce most parts of her body, but these expressions may be independent of their sense of who they are and who they will become. At the same time that many teens' behaviors are ultimately harmless, some of them may be not only harmful but also deadly.

Parents need to talk to their children and make it clear that many of the significant threats to their future health and happiness are not a matter of chance, but are a matter of choice—choices like drinking and driving, smoking, drugs, sexual activity, and dropping out of school. Research tells us that adolescents who engage in one risky behavior are more likely to participate in others. Hence, parents need to be front and center, talking to their children about the potentially deadly consequences of opening that Pandora's box.

Regulation

Effective parents regulate their child's behavior through supervision, appropriate limits, and discipline. Regulation teaches children self-control and respect for the rules. Regulation presents differently depending on parenting style.

We will explore two models of parenting styles. Keep in mind that most parents do not follow any model completely. Real people tend to fall somewhere in between these styles. Moreover, sometimes, parenting styles change from one child to the next or in times when the parent has more or less time and energy for parenting. Parenting styles can also be affected by concerns the parent has in other areas of their life. For example, parenting styles tend to become more authoritarian when parents are tired and perhaps more authoritative when they are more energetic. Sometimes parents seem to change their parenting approach when others are around, maybe because they become more self-conscious as parents or are concerned with giving others the impression that they are a "tough" parent or an "easy-going" parent. Of course, parenting styles may reflect the type of parenting someone saw modeled while growing up.

Baumrind's Parenting Styles

Baumrind (1971) offers a model of parenting that includes three styles. In 1983, Maccoby and Martin modified this model, and it has become one of the most commonly referenced models for describing patterns of parenting. The current model is comprised of two components of parenting: the parent's responsiveness and the parent's demandingness. **Responsiveness** is the connection that the parent facilitates through love, affection, warmth, and support. Unresponsive parents may ignore a child's need for connection or even reject the child. **Demandingness** is the parent's control and management of the child's behavior; this includes setting expectations, limits, and enforcing consequences. The combination of these two parenting behaviors defines the parenting style.

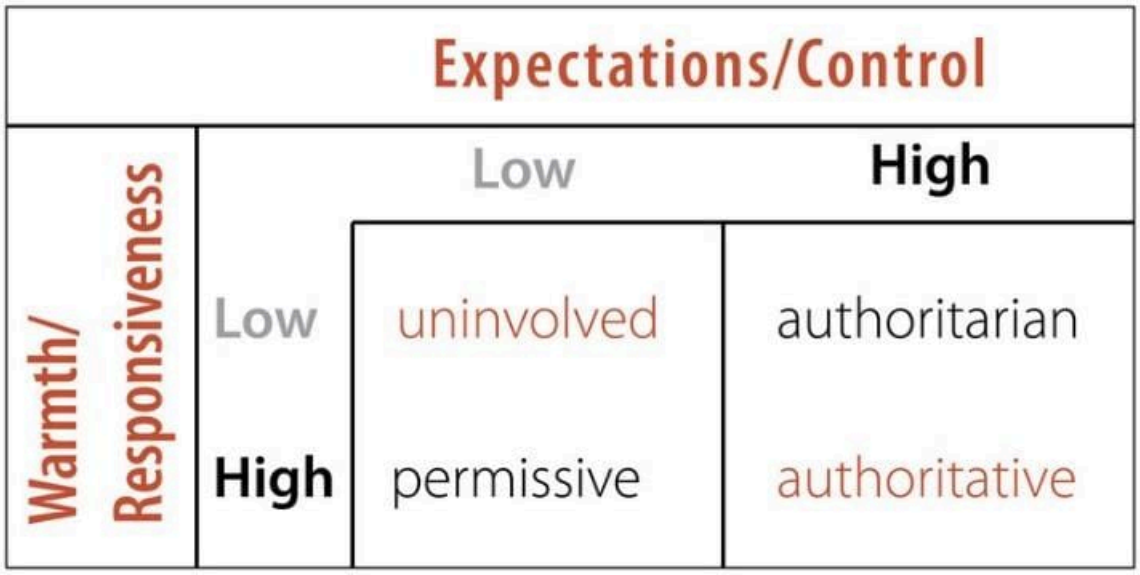


Figure 10.2.1. Baumrind's parenting styles.

The first, the **uninvolved (or neglectful) parenting** style. These parents are low on responsiveness and often disengaged from their children. They are also low on demandingness, with little control over their children's behavior. As a result, their children can be withdrawn, non-compliant, aggressive, and have insecure attachments to others. They suffer in school and in their relationships with their peers (Gecas & Self, 1991).

The **permissive parent** is highly responsive but lacks control. These parents are warm and communicative but provide little structure for their children**.** They may act as a friend to their child rather than an authority figure. Children are allowed to make their own rules and determine their activities. Children may fail to learn self-discipline and be relatively immature. They have low social competence and may feel somewhat insecure because they do not know the limits. These children may also be demanding, rebellious, and aggressive.

The **authoritarian parent** is low on responsiveness and high on demandingness. This parent makes the rules, and the children are expected to be obedient. Baumrind suggests that authoritarian parents tend to place maturity demands on their children that are unreasonably high and tend to be aloof and distant. Consequently, children reared in this way may fear rather than respect their parents and, because their parents do not allow discussion, may take out their frustrations on safer targets – perhaps as bullies toward peers. These children tend to have lower self-control and are less independent. They also may be more aggressive, resistant to correction, or anxious.

Finally, the **authoritative parent** is responsive and reasonably in control. Parents allow negotiation where appropriate and discipline matches the severity of the offense. As a result, their children are friendly, socially competent, confident, self-reliant, cooperative, successful, and happy (Chao, 2001; Stewart and Bond, 2002).

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 10.2.1. *Baumrind's Parenting Styles* explains the differences between parenting styles and the potential consequences on child behavior.

Lemasters and Defrain's Parenting Model

Lemasters and Defrain (1989) offered yet another model of parenting. This model is interesting because it looks more closely at the motivations of the parent and suggests that parenting styles are often designed to meet the psychological needs of the parent rather than the developmental needs of the child.

The **martyr** is a parent who will do anything for the child, even tasks that the child should do for himself or herself. All of the good deeds performed for the child, in the name of being a "good parent," may be used later should the parent want to gain compliance from the child. If a child goes against the parent's wishes, the parent can remind the child of all of the times the parent helped the child and evoke a feeling of guilt so that the child will do what the parent wants. The child learns to be dependent and manipulative as a result.

The **pal** is like the permissive parent described in Baumrind's model above. The pal wants to be the child's friend. Perhaps the parent is lonely, or perhaps the parent is trying to win a popularity contest against an ex-spouse. Pals let children do what they want and focus most on being entertaining and fun. They set few limitations. Consequently, the child may have little self-discipline and may try to test limits with others.

The **police officer/drill sergeant** style of parenting is similar to the authoritarian parent described above. The parent focuses primarily on making sure that the child is obedient and that the parent has full control of the child. Sometimes this can be taken to extremes by giving the child tasks that are really designed to check on their level of obedience. For example, the parent may require that the child fold the clothes and place items back in the drawer in a particular way. If not, the child might be scolded or punished for not doing things "right." This type of parent has a very difficult time allowing the child to grow and learn to make decisions independently. Furthermore, the child may have much resentment toward the parent that is displaced on others.

The **teacher-counselor** parent is one who pays much attention to expert advice on parenting and who believes that as long as all of the steps are followed, the parent can rear a perfect child. "What is wrong with that?" you might ask. There are two major problems with this approach. First, the parent is taking all of the responsibility for the child's behavior, at least indirectly. If the child has difficulty, the parent feels responsible and thinks that the solution lies in reading more advice and trying more diligently to follow that advice. Parents can certainly influence children, but thinking that the parent is fully responsible for the child's outcome is faulty. A parent can only do so much and can never have full control over the child. Another problem with this approach is that the child may get an unrealistic sense of the world and what can be expected from others. For example, if a teacher-counselor parent decides to help the child build self-esteem and has read that telling the child how special he or she is or how important it is to compliment the child on a job well done, the parent may convey the message that everything the child does is exceptional or extraordinary. A child may come to expect that all of his efforts warrant praise, and in the real world, this is not something one can expect. Perhaps children get more of a sense of pride from assessing their performance than from having others praise their efforts.

So what is left? Lemasters and Defrain (1989) suggest that the **athletic coach style of parenting** is best. The principles of coaching are what are important to Lemasters and Defrain. A coach helps players form strategies, supports their efforts, gives feedback on what went right and what went wrong, and stands at the sideline while the players perform. Coaches and referees make sure that the rules of the game are followed and that all players adhere to those rules.

Similarly, the athletic coach as a parent helps the child understand what needs to happen in certain situations, whether in friendships, school, or home life, and encourages and advises the child about how to manage these situations. The parent does not intervene or do things for the child. Instead, the parent's role is to guide while the child learns first hand how to handle these situations. The rules for behavior are consistent and objective and presented in that way. So, a child who is late for dinner might hear the parent respond in this way, "Dinner was at six o'clock." Rather than, "You know good and well that we always eat at six. If you expect me to get up and make something for you now, you have got another thing coming! Just who do you think you are showing up late and looking for food? You're grounded until further notice!"

The most important thing to remember about parenting is that parents can always improve. They can practice being more objective. They can learn about what is reasonable to expect of a child and their stage of development. They can recognize their own needs and limitations. Parenting is more difficult when parents have physical or psychological needs that interfere with decision making. Some of the best advice for parents is to try not to take the child's actions personally, and be as objective as possible.

Influences on Parenting

Parenting is a complex process in which parents and children influence on another. There are many reasons that parents behave the way they do. The multiple influences on parenting are still being explored. Proposed influences on parenting include parent characteristics, child characteristics, and contextual and sociocultural characteristics (Belsky, 1984; Demick, 1999).

Parent Characteristics

Parents bring unique traits and qualities to the parenting relationship that affect their decisions as parents. These characteristics include the age of the parent, gender, beliefs, personality, developmental history, knowledge about parenting and child development, and mental and physical health. Parents' personalities affect parenting behaviors. Mothers and fathers who are more agreeable, conscientious, and outgoing are warmer and provide more structure to their children. Parents who are more agreeable, less anxious, and less negative also support their children's autonomy more than parents who are anxious and less agreeable (Prinzie, Stams, Dekovic, Reijntes, & Belsky, 2009). Parents who have these personality traits appear to be better able to respond to their children positively and provide a more consistent, structured environment for their children. Figure 7.33 Source 294 Parents' developmental histories, or their experiences as children, also affect their parenting strategies. Parents may learn parenting practices from their parents. Fathers whose own parents provided monitoring, consistent and age-appropriate discipline, and warmth were more likely to provide this constructive parenting to their children (Kerr, Capaldi, Pears, & Owen, 2009). Patterns of negative parenting and ineffective discipline also appear from one generation to the next. However, parents who are dissatisfied with their own parents' approach may be more likely to change their parenting methods with their children.

Child Characteristics

Parenting is bidirectional. Not only do parents affect their children, but children also influence their parents. Child characteristics, such as gender, birth order, temperament, and health status, affect parenting behaviors and roles. For example, an infant with an easy temperament may enable parents to feel more effective, as they are easily able to soothe the child and elicit smiling and cooing. On the other hand, a cranky or fussy infant elicits fewer positive reactions from his or her parents and may result in parents feeling less effective in the parenting role (Eisenberg et al., 2008). Over time, parents of more difficult children may become more punitive and less patient with their children (Clark, Kochanska, & Ready, 2000; Eisenberg et al., 1999; Kiff, Lengua, & Zalewski, 2011). Parents who have a fussy, difficult child are less satisfied with their marriages and have greater challenges in balancing work and family roles (Hyde, Else-Quest, & Goldsmith, 2004). Thus, child temperament, as previously discussed in chapter 3, is one of the child characteristics that influence how parents behave with their children. Another child characteristic is the gender of the child. Parents respond differently to boys and girls. Parents often assign different household chores to their sons and daughters. Girls are more often responsible for caring for younger siblings and household chores, whereas boys are more likely to be asked to perform chores outside the home, such as mowing the lawn (Grusec, Goodnow, & Cohen, 1996). Parents also talk differently with their sons and daughters, providing more scientific explanations to their sons and using more emotional words with their daughters (Crowley, Callanan, Tenenbaum, & Allen, 2001).

Contextual Factors and Sociocultural Characteristics

The parent-child relationship does not occur in isolation. Sociocultural characteristics, including economic hardship, religion, politics, neighborhoods, schools, and social support, also influence parenting. Parents who experience economic hardship are more easily frustrated, depressed, and sad, and these emotional characteristics affect their parenting skills (Conger & Conger, 2002).

The impact of class and culture cannot be ignored when examining parenting styles as they influence parenting behaviors in fundamental ways. While promoting the development of skills necessary to function effectively in one's community is a universal goal of parenting, the specific skills necessary vary widely from culture to culture. Thus, parents have different goals for their children that partially depend on their culture (Tamis-LeMonda et al., 2008). Parents vary in how much they emphasize goals for independence and individual achievements, maintaining harmonious relationships, and being embedded in a strong network of social relationships.

For example, the two models of parenting described above assume that authoritative and athletic coaching styles are best because they are designed to help the parent raise a child who is independent, self-reliant, and responsible. These are qualities favored in "individualistic" cultures such as the United States, particularly by the middle class.

Authoritarian parenting has been used historically and reflects the cultural need for children to do as they are told. African-American, Hispanic, and Asian parents tend to be more authoritarian than non-Hispanic whites. In collectivistic cultures such as China or Korea, being obedient and compliant are favored behaviors. In societies where family members' cooperation is necessary for survival, as in the case of raising crops, rearing children who are independent and who strive to be on their own makes no sense. However, in an economy based on being mobile in order to find jobs and where one's earnings are based on education, raising a child to be independent is very important.

Working-class parents are more likely than middle-class parents to focus on obedience and honesty when raising their children. In a classic study on social class and parenting styles called *Class and Conformity*, Kohn (1977) explained that parents tend to emphasize qualities that are needed for their own survival when parenting their children. Working-class parents are rewarded for being obedient, reliable, and honest in their jobs. They are not paid to be independent or to question the management; rather, they move up and are considered good employees if they show up on time, do their work as they are told, and can be counted on by their employers. Consequently, these parents reward honesty and obedience in their children. Middle-class parents who work as professionals are rewarded for taking the initiative, being self-directed, and assertive in their jobs. They are required to get the job done without being told precisely what to do. They are asked to be innovative and to work independently. These parents encourage their children to have those qualities as well by rewarding independence and self-reliance. Parenting styles can reflect many elements of culture.

Other important contextual characteristics, such as the neighborhood, school, and social networks, also affect parenting, even though these settings do not always include both the child and the parent (Brofenbrenner, 1989). Culture is also a contributing contextual factor, as discussed previously in chapter four. For example, Latina mothers who perceived their neighborhood as more dangerous showed less warmth with their children, perhaps because of the greater stress associated with living a threatening environment (Gonzales et al., 2011).

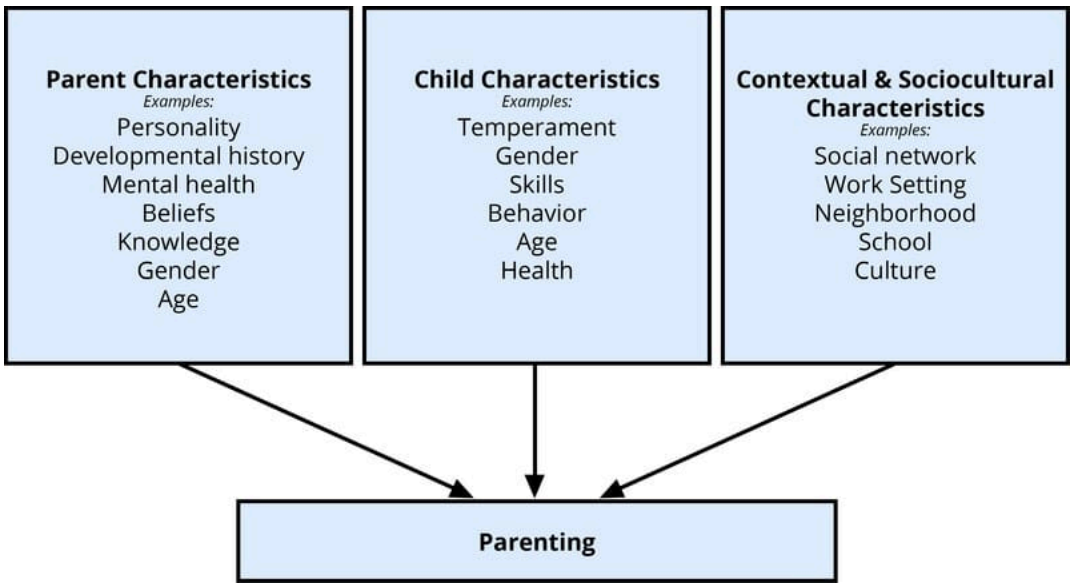


Figure 10.2.2. Influences on parenting.

The Changing Parent-Child Relationship

Despite common perception, it appears that most teens do not experience adolescent "storm and stress" to the degree once famously suggested by G. Stanley Hall, a pioneer in the study of adolescent development. Only small numbers of teens have major conflicts with their parents (Steinberg & Morris, 2001), and most disagreements are minor. For example, in a study of over 1,800 parents of adolescents from various cultural and ethnic groups, Barber (1994) found that conflicts occurred over day-to-day issues such as homework, money, curfews, clothing, chores, and friends. These disputes occur because an adolescent's drive for independence and autonomy conflicts with the parent's supervision and control. These types of arguments tend to decrease as teens develop (Galambos & Almeida, 1992).

Candela Citations

CC licensed content, Original

- Key Components of Good Parenting . **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...ood-parenting/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- Communication. **Provided by**: U.S. Department of Education. **Retrieved from**: https://www2.ed.gov/parents/academic...nce/part6.html. **License**: CC0: No Rights Reserved

CC licensed content, Shared previously

- Social Development During Adolescence. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...g-adolescence/. **License**: CC BY: Attribution
- Family Life and Parenting Styles. **Authored by**: Stephanie Loalada. **Provided by**: Lumen Learning . **Retrieved from**: https://courses.lumenlearning.com/wm...enting-styles/. **License**: CC BY: Attribution

All rights reserved content

- Baumrind's Parenting Styles. **Provided by**: Psych Exam Review. **Retrieved from**: https://youtu.be/Hljt9xSlYsc. **License**: All Rights Reserved

Public domain content

- Setting Limits. **Provided by**: U.S. Department of Health and Human Services . **Retrieved from**: https://www.hhs.gov/ash/oah/adolesce...its/index.html. **License**: CC0: No Rights Reserved
- Independence . **Provided by**: U.S. Department of Education. **Retrieved from**: https://www2.ed.gov/parents/academic...nce/part7.html. **License**: CC0: No Rights Reserved

This page titled 10.1: Key Components of Good Parenting is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

10.2: Family Life

A good home environment is one in which the child's physical, cognitive, emotional, and social needs are adequately met. Sometimes families emphasize physical needs but ignore cognitive or emotional needs. Other times, families pay close attention to physical needs and academic requirements but may fail to nurture the child's friendships with peers or guide the child toward developing healthy relationships. Parents might want to consider how it feels to live in the household. Is it stressful and conflict-ridden? Is it a place where family members enjoy being?

Family Change: Divorce

Much attention has been given to the impact of divorce on the life of children. The assumption has been that divorce has a strong, negative impact on the child and that single-parent families are deficient in some way. However, the research suggests that 75 to 80 percent of children and adults who experience divorce suffer no long term effects (Hetherington & Kelly, 2002). Children of divorce and children who have not experienced divorce are more similar than different (Hetherington & Kelly, 2002).

Mintz (2004) suggests that the alarmist view of divorce was due in part to the newness of divorce when rates in the United States began to climb in the late 1970s. Adults reacting to the change grew up in the 1950s when rates were low. As divorce has become more common, and there is less stigma associated with divorce, this view has changed somewhat. Social scientists have operated from divorce as a deficit model emphasizing the problems of being from a "broken home" (Seccombe &Warner, 2004). More recently, a more objective view of divorce, re-partnering, and remarriage indicate that divorce, remarriage, and life in stepfamilies can have a variety of effects. The exaggeration of the negative consequences of divorce has left the majority of those who do well hidden and subjected them to unnecessary stigma and social disapproval (Hetherington & Kelly, 2002).

The tasks of families listed above are functions that can be fulfilled in a variety of family types-not just intact, two-parent households. Harmony and stability can be achieved in many family forms and when it is disrupted, either through divorce, or efforts to blend families, or any other circumstances, the child suffers (Hetherington & Kelly, 2002).

Factors Affecting the Impact of Divorce

As we look at the consequences (both pro and con) of divorce and remarriage on children, keep these family functions in mind. Some negative consequences are a result of financial hardship rather than divorce per se (Drexler, 2005). Some positive consequences reflect improvements in meeting these functions. For instance, we have learned that positive self-esteem comes in part from a belief in the self and one's abilities rather than merely being complimented by others. In single-parent homes, children may be given more opportunity to discover their abilities and gain the independence that fosters self-esteem. If divorce leads to fighting between the parents and the child is included in these arguments, the self-esteem may suffer.

The impact of divorce on children depends on several factors. The degree of conflict before divorce plays a role. If the divorce means a reduction in tensions, the child may feel relief. If the parents have kept their conflicts hidden, the announcement of a divorce can come as a shock and be met with enormous resentment. Another factor that has a significant impact on the child concerns financial hardships they may suffer, especially if financial support is inadequate. Another difficult situation for children of divorce is the position they are put into if the parents continue to argue and fight-especially if they bring the children into those arguments.

Short-term consequences: In roughly the first year following divorce, children may exhibit some of these short-term effects:

- **Grief over losses suffered**. The child will grieve the loss of the parent they no longer see as frequently. The child may also grieve about other family members that are no longer available. Grief sometimes comes in the form of sadness, but it can also be experienced as anger or withdrawal. Preschool-aged boys may act out aggressively while the same-aged girls may become more quiet and withdrawn. Older children may feel depressed.
- **Reduced Standard of Living**. Very often, divorce means a change in the amount of money coming into the household. Children experience in new constraints on spending or entertainment. School-aged children, especially, may notice that they can no longer have toys, clothing, or other items to which they have grown accustomed, or it may mean that there is less eating out or canceling satellite television, and so on. The custodial parent may experience stress at not being able to rely on child support payments or having the same level of income as before. This uncertainty can affect decisions regarding healthcare, vacations, rents, mortgages, and other expenditures. The stress can result in less happiness and relaxation in the

home. The parent who has to take on more work may also be less available to the children.
- **Adjusting to Transitions**. Children may also have to adjust to other changes accompanying a divorce. The divorce might mean moving to a new home and changing schools or friends. It might mean leaving a neighborhood that has meant a lot to them as well.

Long-Term consequences: The following are some effects found after the first year of a divorce:

- **Economic/Occupational Status**. One of the most commonly cited long-term effects of divorce is that children of divorce may have lower levels of education or occupational status. This finding may be a consequence of lower-income and resources for funding education rather than to divorce per se. In those households where economic hardship does not occur, there may be no impact on education or occupational status (Drexler, 2005).
- **Improved Relationships with the Custodial Parent**(usually the mother): The majority of custodial parents are mothers (approximately 80.4 percent) and
  19.6 percent of custodial parents are fathers. Shared custody is on the rise, however, and shows promising social, academic, and psychological results for the children. Children from single-parent families talk to their mothers more often than children of two-parent families (McLanahan and Sandefur, 1994). Most children of divorce lead happy, well-adjusted lives and develop stronger, positive relationships with their custodial parent (Seccombe and Warner, 2004). In a study of college-age respondents, Arditti (1999) found that increasing closeness and a movement toward more democratic parenting styles was experienced. Others have also found that relationships between mothers and children become closer and stronger (Guttman, 1993) and suggest that greater equality and less rigid parenting is beneficial after divorce (Steward, Copeland, Chester, Malley, and Barenbaum, 1997).
- **Greater emotional independence in sons**. Drexler (2005) notes that sons who are raised by mothers only develop an emotional sensitivity to others that is beneficial in relationships.
- **Feeling more anxious in their own love relationships.** Children of divorce may feel more anxious about their relationships as adults. This anxiety may reflect a fear of divorce if things go wrong, or it may be a result of setting higher expectations for their relationships.
- **Adjustment of the custodial parent**. Furstenberg and Cherlin (1991) believe that the primary factor influencing the way that children adjust to divorce is the way the custodial parent adjusts to the divorce. If that parent is adjusting well, the children will benefit. This factor may explain a good deal of the variation we find in children of divorce. Adults going through a divorce should consider good self-care as beneficial to the children-not as self-indulgent.
- **Mental health issues**: Some studies suggest that anxiety and depression that are common in children and adults within the first year of divorce may not resolve. A 15-year study by Bohman, Låftman, Päären, Jonsson (2017) suggests that parental separation significantly increases the risk for depression 15 years later when depression rates were compared to matched controls. In fact, the risk of depression was related more strongly with parental conflict and parental separation than it was with parental depression!

Changing Family Structure

According to the 2010 census data, only 66 percent of children under seventeen years old live in a household with two married parents. This is a decrease from 77 percent in 1980 (U.S. Census, 2011). This two-parent family structure is known as a **nuclear family,** referring to married parents and children as the nucleus, or core, of the group. Recent years have seen a rise in variations of the nuclear family with the parents not being married. Three percent of children live with two cohabiting parents (U.S. Census 2011).

Some two-parent households consist of same-sex parents. Over 30% of same-sex couples are raising children, not far from the 43 percent of opposite-sex couples (U.S. Census 2009). Of the children in same-sex couple households, 73 percent are biological children (of only one of the parents), 21 percent are adopted only, and 6 percent are a combination of biological and adopted (U.S. Census 2009). While there have been some questions regarding the well-being of children who grow up in same-sex households, research reports that same-sex parents are as effective as opposite-sex parents. In an analysis of 81 parenting studies, sociologists found no quantifiable data to support the notion that opposite-sex parenting is any better than same-sex parenting. Children of lesbian couples, however, were shown to have slightly lower rates of behavioral problems and higher rates of self-esteem (Biblarz and Stacey 2010).

Single-parent households are on the rise. In 2010, 27 percent of children lived with a single parent only, up from 25 percent in 2008. Of that 27 percent, 23 percent live with their mother, and three percent live with their father. Ten percent of children living with their single mother and 20 percent of children living with their single father also live with the cohabitating partner of their parent (for example, boyfriends or girlfriends).

Stepparents are an additional family element in two-parent homes. Among children living in two-parent households, 9 percent live with a biological or adoptive parent and a stepparent. The majority (70 percent) of those children live with their biological mother and a stepfather. Family structure has been shown to vary with the age of the child. Older children (fifteen to seventeen years old) are less likely to live with two parents than adolescent children (six to fourteen years old) or young children (zero to five years old). Older children who do live with two parents are also more likely to live with stepparents (U.S. Census 2011).

In some family structures, a parent is not present at all. In 2010, three million children (4 percent of all children) lived with a guardian who was neither their biological nor adoptive parent. Of these children, 54 percent live with grandparents, 21 percent live with other relatives, and 24 percent live with nonrelatives. This family structure is referred to as the **extended family** and may include aunts, uncles, and cousins living in the same home. Foster parents account for about a quarter of nonrelatives. The practice of grandparents acting as parents, whether alone or in combination with the child's parent, is becoming widespread among today's families (De Toledo and Brown 1995). Nine percent of all children live with a grandparent, and in nearly half those cases, the grandparent maintains primary responsibility for the child (U.S. Census 2011). A grandparent functioning as the primary care provider often results from parental drug abuse, incarceration, or abandonment. Events like these can render the parent incapable of caring for his or her child.

Changes in the traditional family structure raise questions about how such societal shifts affect children. U.S. Census statistics have long shown that children living in homes with both parents grow up with more financial and educational advantages than children who are raised in single-parent homes (U.S. Census 1997). Parental marital status seems to be a significant indicator of advancement in a child's life. Children living with a divorced parent typically have more advantages than children living with a parent who never married; this is particularly true of children who live with divorced fathers. This finding correlates with the statistic that never-married parents are typically younger, have fewer years of schooling, and have lower incomes (U.S. Census 1997). Six in ten children living with only their mother live near or below the poverty level. Of those being raised by single mothers, 69 percent live in or near poverty compared to 45 percent for divorced mothers (U.S. Census 1997). Though other factors such as age and education play a role in these differences, it can be inferred that marriage between parents is generally beneficial for children.

Sibling Relationships

Siblings spend a considerable amount of time with each other and offer a unique relationship that is not found with same-age peers or with adults. Siblings play an important role in the development of social skills. Cooperative and pretend play interactions between younger and older siblings can teach empathy, sharing, and cooperation (Pike, Coldwell, & Dunn, 2005), as well as negotiation and conflict resolution (Abuhatoum & Howe, 2013). However, the quality of sibling relationships is often mediated by the quality of the parent-child relationship and the psychological adjustment of the child (Pike et al., 2005). For instance, more negative interactions between siblings have been reported in families where parents had poor patterns of communication with their children (Brody, Stoneman, & McCoy, 1994). Children who have emotional and behavioral problems are also more likely to have negative interactions with their siblings. However, the psychological adjustment of the child can sometimes be a reflection of the parent-child relationship. Thus, when examining the quality of sibling interactions, it is often difficult to tease out the separate effect of adjustment from the effect of the parent-child relationship.

While parents want positive interactions between their children, conflicts are going to arise, and some confrontations can be the impetus for growth in children's social and cognitive skills. The sources of conflict between siblings often depend on their respective ages. Dunn and Munn (1987) revealed that over half of all sibling conflicts in early childhood were disputes about property rights. By middle childhood, this starts shifting toward control over social situations, such as what games to play, disagreements about facts or opinions, or rude behavior (Howe, Rinaldi, Jennings, & Petrakos, 2002). Researchers have also found that the strategies children use to deal with conflict change with age, but that this is also tempered by the nature of the conflict. Abuhatoum and Howe (2013) found that coercive strategies (e.g., threats) were preferred when the dispute centered on property rights, while reasoning was more likely to be used by older siblings and in disputes regarding control over the social situation. However, younger siblings also use reasoning, frequently bringing up the concern of legitimacy (e.g., "You're not the boss") when in conflict with an older sibling. This strategy is commonly used by younger siblings and is possibly an adaptive strategy in order for younger siblings to assert their autonomy (Abuhatoum & Howe, 2013). A number of researchers have found that children who can use non-coercive strategies are more likely to have a successful resolution, whereby a compromise is reached, and neither child feels slighted (Ram & Ross, 2008; Abuhatoum & Howe, 2013).

Not surprisingly, friendly relationships with siblings often lead to more positive interactions with peers. The reverse is also true. A child can also learn to get along with a sibling, with, as the song says, "a little help from my friends" (Kramer & Gottman, 1992).

In late adolescence, as teens become more independent, research has shown a decline in the frequency of interactions between

siblings, as presumably peers and romantic relationships become more central to the lives of young people. Aquilino (2006) suggests that during this transition, the task may be to maintain enough of a sibling bond so that there will be a foundation for this relationship in later life. Those who are successful can often move away from the “older-younger” sibling conflicts of childhood, toward an equal relationship between two adults. Siblings that were close to each other in childhood are typically close in adulthood (Dunn, 1984, 2007), and in fact, it is unusual for siblings to develop closeness for the first time in adulthood. Overall, the majority of adult sibling relationships are close (Cicirelli, 2009).

Candela Citations

CC licensed content, Original

- Family Life. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...r/family-life/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Variations in Family Life. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/sa...-needs-update/. **License**: CC BY: Attribution

This page titled 10.2: Family Life is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

10.3: Child Maltreatment



The Child Abuse Prevention and Treatment Act (United States Department of Health and Human Services, 2013) defines **child maltreatment** as any recent act or failure to act on the part of a parent or caretaker which results in death, serious physical or emotional harm, sexual abuse or exploitation; or an act or failure to act, which presents an imminent risk of serious harm (p. viii). **Child abuse** occurs when a parent or caretaker inflicts, or allows someone to inflict, serious physical injury other than by accidental means. **Child neglect** is the failure of a parent or caretaker to provide for a child's needs to the degree that the child's health, safety, and well-being are threatened with harm. Each state has its own definition of child abuse based on federal law, and most states recognize four major types of maltreatment: neglect, physical abuse, sexual abuse, and psychological maltreatment. Each of the forms of child maltreatment may be identified alone, but they can occur in combination.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 10.4.1. *What are Child Abuse and Neglect* discusses the different types of abuse and interventions to prevent maltreatment.

Child Protective Services (CPS) agencies received an estimated 3.5 million referrals involving approximately 6.4 million children, and 2.1 million referrals (60%) were investigated. This is a rate of 28.3 per 1,000 children in the national population. Three-fifths of child abuse reports are made by professionals, including teachers, law enforcement personnel, and social services staff. The rest are made by anonymous sources, other relatives, parents, friends, and neighbors.

Child maltreatment may come in several forms, the most common being neglect (78.3%), followed by physical abuse (10.%), sexual abuse (7.6%), psychological maltreatment (7.6%), and medical neglect (2.4%) (Child Help, 2011). Some children suffer from a combination of these forms of abuse. The majority (81.2%) of perpetrators are parents; 6.2 percent are other relatives.

Nationally, an estimated 1,520 children die from abuse and neglect, and nearly three-quarters (73.9%) of all child fatalities were younger than three years old. Boys had a higher child fatality rate (2.36 per 100,000 boys) than girls (1.77 per 100,000 girls). More than 85 percent (86.8%) of child fatalities were comprised of White (39.3%), African-American (33.0%), and Hispanic (14.5%) victims, and 78.9% of child fatalities were caused by one or both parents (United States Department of Health and Human Services, 2013).

As most reports of abuse and neglect come from professionals working with children, they need to be aware of the potential signs of abuse and neglect. The following signs exhibited by children and their parents may signal the presence of child abuse or

neglect.

The Child:

- Shows sudden changes in behavior or school performance
- Has not received help for physical or medical problems brought to the parents' attention
- Has learning problems (or difficulty concentrating) that cannot be attributed to specific physical or psychological causes
- Is always watchful, as though preparing for something bad to happen
- Lacks adult supervision What Is Child Abuse and Neglect?
- Is overly compliant, passive, or withdrawn
- Comes to school or other activities early, stays late, and does not want to go home
- Is reluctant to be around a particular person
- Discloses maltreatment

The Parent:

- Denies the existence of—or blames the child for—the child's problems in school or at home
- Asks teachers or other caregivers to use harsh physical discipline if the child misbehaves
- Sees the child as entirely bad, worthless, or burdensome
- Demands a level of physical or academic performance the child cannot achieve
- Looks primarily to the child for care, attention, and satisfaction of the parent's emotional needs
- Shows little concern for the child The Parent and Child:
- Rarely touch or look at each other
- Consider their relationship entirely negative
- States that they do not like each other

The above list may not be *all* the signs of abuse or neglect. It is essential to pay attention to other behaviors that may seem unusual or concerning. In addition to these signs and symptoms, Child Welfare Information Gateway provides information on the risk factors and perpetrators of child abuse and neglect fatalities.

Neglect

Neglect is the failure of a parent, guardian, or other caregivers to provide for a child's basic needs. There are many forms of neglect: physical, medical, educational, emotional, and abandonment.

Physical is a failure to provide for the child's physical needs. Parents must provide their children with food and water. They also need safe, appropriate shelter. Shelter may be more than just a roof of their head. Is the home structurally safe? Is there a means for keeping the house a safe temperature? Is there water for hygiene? Are there any health and safety issues with the home? Parents are also required to provide appropriate supervision for the child to keep them safe. Appropriate may be challenging to define. Many states do not provide strict rules as to when children may be unsupervised or for how long, or when children can be responsible for caring for younger siblings. That is due to variations in maturity. Some 10-year-olds can be trusted to stay home alone for short periods, and some 15-year-olds cannot be left unsupervised for any amount of time.

Medical neglect is the failure to provide the necessary medical or mental health treatment that a child needs. If a child is injured or sick and requires medical intervention, it is the parents' responsibility to be sure that the child gets help. The same is true if the child were having a mental health crisis or needed psychological intervention for their health and safety. Finally, dental issues that cause the child pain or infection would also be a medical requirement. Medical neglect can be another challenge to define. For example, would never take a child to a doctor for a physical be neglect? What about the failure to get the child vaccinated? In many states, failure to provide preventative medical care would not be considered neglect.

Educational neglect is a failure to educate a child. All children have the right to free public education, but it is the parents' responsibility to make sure that the child gets to school—at least for the time in which school is compulsory. In most states, kindergarten is not mandatory. Similarly, after a certain age, teens are no longer required to attend school. Educational neglect would not apply in these situations. If a parent chooses not to send their child to a public school, it is then their responsibility to ensure that the child receives an appropriate education. This education could be through a private school or homeschooling. Each state has its own regulations around what is considered acceptable for private or homeschooling education. Some states have strict rules that require regular submission of lessons, updates regarding student progress, and mandates for all children to take standardized exams. Other states require no more than a letter from the parent stating that the child will be homeschooled,

no follow-up on the child's learning. Educational neglect may also be a failure for the parent to attend to special education needs, even if the child is in public school. Parents that do not comply with requests to get their child tested, meet for planning meetings, or sign off on educational plans may impede their child from receiving the special education services that they require.

Emotional neglect is the failure to meet a child's emotional needs. This behavior could range from being inattentive or emotionally unavailable to the child to being outright rejecting. Children need affection, love, support, and social interaction. For younger children, this primarily comes from their caregivers, but even older children need to feel love from their parents.

Abandonment includes situations where the parent's identity or whereabouts are unknown, the child has been left alone in circumstances where the child suffers serious harm, or the parent has failed to maintain contact with the child or provide reasonable support for a specified period. If a parent cannot be present to care for their child, it is their responsibility to arrange for safe, appropriate care.

Consider the possibility of neglect when the child:

- Is frequently absent from school
- Begs or steals food or money Lacks needed medical or dental care, immunizations, or glasses
- Is consistently dirty and has severe body odor
- Lacks sufficient clothing for the weather
- Abuses alcohol or other drugs
- States that there is no one at home to provide care

Consider the possibility of neglect when the parent or other adult caregiver:

- Appears to be indifferent to the child
- Seems apathetic or depressed
- Behaves irrationally or in a bizarre manner
- Is abusing alcohol or other drugs

Many parents do not purposely neglect their children; factors such as cultural values, the standard of care in a community, and poverty can lead to a hazardous level of neglect. If information or assistance from public or private services are available, and a parent fails to use those services, child welfare services may intervene (U.S. Department of Health and Human Services).

Physical Abuse

Physical Abuse is nonaccidental physical injury (ranging from minor bruises to severe fractures or death) as a result of punching, beating, kicking, biting, shaking, throwing, stabbing, choking, hitting (with a hand, stick, strap, or other objects), burning, or otherwise harming a child, that is inflicted by a parent, caregiver, or other people who have responsibility for the child. Such injury is considered abuse regardless of whether the caregiver intended to hurt the child. Physical abuse in children may come in the form of beating, kicking, throwing, choking, hitting with objects, burning, or other methods. Physical discipline, such as spanking or paddling, is not considered abuse as long as it is reasonable and causes no bodily injury to the child (Child Welfare Information Gateway, 2008).

This issue is somewhat controversial among modern-day people in the United States. While some parents feel that physical discipline, or corporal punishment, is an effective way to respond to bad behavior, others feel that it is a form of abuse. According to a poll conducted by ABC News, 65 percent of respondents approve of spanking, and 50 percent said that they sometimes spank their child.

Consider the possibility of physical abuse when the child:

- Has unexplained burns, bites, bruises, broken bones, or black eyes
- Has fading bruises or other marks noticeable after an absence from school
- Seems frightened of the parents and protests or cries when it is time to go home
- Shrinks at the approach of adults
- Reports injury by a parent or another adult caregiver
- Abuses animals or pets

Consider the possibility of physical abuse when the parent or other adult caregiver:

- Offers conflicting, unconvincing, or no explanation for the child's injury, or provides an explanation that is not consistent with the injury
- Describes the child as "evil" or in some other very negative way
- Uses harsh physical discipline with the child
- Has a history of abuse as a child
- Has a history of abusing animals or pets

The tendency toward physical punishment may be affected by culture and education. Those who live in the South are more likely than those who live in other regions of the United States to spank their child. Those who do not have a college education are also more likely to spank their child (Crandall, 2011). Studies have shown that spanking is not an effective form of punishment and may lead to aggression by the victim, particularly in those who are spanked at a young age (Berlin 2009).

Sexual Abuse

Sexual abuse includes activities by a parent or caregiver such as fondling a child's genitals, penetration, incest, rape, sodomy, indecent exposure, and exploitation through prostitution or the production of pornographic materials. Sexual abuse is defined as "the employment, use, persuasion, inducement, enticement, or coercion of any child to engage in, or assist any other person to engage in, any sexually explicit conduct or simulation of such conduct for the purpose of producing a visual depiction of such conduct; or the rape, and in cases of caretaker or inter-familial relationships, statutory rape, molestation, prostitution, or other forms of sexual exploitation of children, or incest with children" (Child Welfare Information Gateway, 2008).

Researchers estimate that 1 out of 4 girls and 1 out of 10 boys have been sexually abused (Valente, 2005). The median age for sexual abuse is 8 or 9 years for both boys and girls (Finkelhor et al. 1990). Most boys and girls are sexually abused by a male. Childhood sexual abuse is defined as any sexual contact between a child and an adult or a much older child. Incest refers to sexual contact between a child and family members. In each of these cases, the child is exploited by an older person without regard for the child's developmental immaturity and inability to understand the sexual behavior (Steele, 1986).

Although rates of sexual abuse are higher for girls than for boys, boys may be less likely to report abuse because of the cultural expectation that boys should be able to take care of themselves and because of the stigma attached to homosexual encounters (Finkelhor et al. 1990). Girls are more likely to be victims of incest, and boys are more likely to be abused by someone outside the family. Sexual abuse can create feelings of self-blame, betrayal, and feelings of shame and guilt (Valente, 2005). Sexual abuse is particularly damaging when the perpetrator is someone the child trusts. Victims of sexual abuse may suffer from depression, anxiety, problems with intimacy, and suicide (Valente, 2005). Sexual abuse has additional impacts, as well. Studies suggest that children who have been sexually abused have an increased risk of eating disorders and sleep disturbances. Further, sexual abuse can lead to Post Traumatic Stress Disorder.

Consider the possibility of sexual abuse when the child:

- Has difficulty walking or sitting
- Suddenly refuses to change for gym or to participate in physical activities
- Reports nightmares or bedwetting
- Experiences a sudden change in appetite
- Demonstrates bizarre, sophisticated, or unusual sexual knowledge or behavior
- Becomes pregnant or contracts a venereal disease, particularly if under age 14
- Runs away • Reports sexual abuse by a parent or another adult caregiver
- Attaches very quickly to strangers or new adults in their environment

Consider the possibility of sexual abuse when the parent or other adult caregiver:

- Is unduly protective of the child or severely limits the child's contact with other children, especially of the opposite sex
- Is secretive and isolated
- Is jealous or controlling with family members

Being sexually abused as a child can have a powerful impact on self-concept. The concept of **false self-training** (Davis, 1999) refers to holding a child to adult standards while denying the child's developmental needs. Sexual abuse is just one example of false self-training. These abused children are held to adult standards of desirableness and sexuality while their level of cognitive, psychological, and emotional immaturity are ignored. Consider how confusing it might be for a 9-year-old girl who has physically matured early to be thought of as a potential sex partner. Her cognitive, psychological, and emotional state does not equip her to

make decisions about sexuality or, perhaps, to know that she can say no to sexual advances. She may feel like a 9-year-old in all ways and be embarrassed and ashamed of her physical development. Girls who mature early have problems with low self-esteem because of the failure of others (family members, teachers, ministers, peers, advertisers, and others) to recognize and respect their developmental needs. Overall, youth are more likely to be victimized because they do not have control over their contact with offenders (parents, babysitters, etc.) and have no means of escape (Finkelhor and Dzuiba-Leatherman, in Davis, 1999).

Psychological Maltreatment

Psychological maltreatment is a pattern of behavior that impairs a child's emotional development or sense of self-worth. This behavior may include constant criticism, threats, or rejection, as well as withholding love, support, or guidance. Emotional abuse is often difficult to prove, and therefore, child protective services may not be able to intervene without evidence of harm or mental injury to the child. Emotional abuse is almost always present when other types of maltreatment are identified.

Consider the possibility of emotional maltreatment when the child:

- Shows extremes in behavior, such as overly compliant or demanding behavior, extreme passivity, or aggression
- Is either inappropriately adult (parenting other children, for example) or inappropriately infantile (frequently rocking or head-banging, for example)
- Is delayed in physical or emotional development
- Has attempted suicide
- Reports a lack of attachment to the parent

Consider the possibility of emotional maltreatment when the parent or other adult caregiver:

- Constantly blames, belittles, or berates the child
- Is unconcerned about the child and refuses to consider offers of help for the child's problems
- Overtly rejects the child

Risk Factors for Maltreatment

Child abuse occurs at all socioeconomic and education levels and crosses ethnic and cultural lines. Just as child abuse is often associated with stresses felt by parents, including financial stress, parents who demonstrate resilience to these stresses are less likely to abuse (Samuels 2011). Young parents are typically less capable of coping with stresses, particularly the stress of becoming a new parent. Teenage mothers are more likely to abuse their children than their older counterparts. As a parent's age increases, the risk of abuse decreases. Children born to mothers who are fifteen years old or younger are twice as likely to be abused or neglected by age five than are children born to mothers ages twenty to twenty-one (George and Lee 1997).

Drug and alcohol use is also a known contributor to child abuse. Children raised by substance abusers have a risk of physical abuse three times greater than other kids, and neglect is four times as prevalent in these families (Child Welfare Information Gateway 2011). Other risk factors include social isolation, depression, low parental education, and a history of being mistreated as a child. Approximately 30 percent of abused children will later abuse their own children (Child Welfare Information Gateway 2006).

Outcomes Associated with Maltreatment

Child abuse and neglect can have lifelong implications for victims, including the impact on physical, mental, and emotional wellbeing. While the physical wounds heal, there are several long-term consequences of experiencing the trauma of abuse or neglect. Children who are maltreated are at risk of experiencing cognitive delays and emotional difficulties, among other issues. Childhood trauma also negatively affects nervous system and immune system development, putting children who have been maltreated at a higher risk for health problems as adults

Injury, poor health, and mental instability occur at a high rate in this group, with 80 percent meeting the criteria of one or more psychiatric disorders, such as depression, anxiety, or suicidal behavior, by age twenty-one. Abused children may also suffer from cognitive and social difficulties. Behavioral consequences will affect most, but not all, of child abuse victims. Children of abuse are 25 percent more likely, as adolescents, to suffer from difficulties like poor academic performance and teen pregnancy, or to engage in behaviors like drug abuse and general delinquency. They are also more likely to participate in risky sexual acts

that increase their chances of contracting a sexually transmitted disease (Child Welfare Information Gateway, 2006). Other risky behaviors include drug and alcohol abuse. As these consequences can affect healthcare, education, and criminal systems, the problems resulting from child abuse do not just belong to the child and family, but to society as a whole.

Reporting Maltreatment

Mandated reporters are required to report suspected child abuse or maltreatment when they are presented with a reasonable cause to suspect child abuse or maltreatment in a situation where a child, parent, or other person legally responsible for the child is before the mandated reporter
when the mandated reporter is acting in their official or professional capacity. “Other person legally responsible” refers to a guardian, caretaker, or other person 18 years of age or older who is responsible for the care of the child (NYSOCFS, 2024).

Mandated reporters typically include any individual who works in the medical field, education, childcare, youth residential programs, psychological or social services, or legal and judicial services.

It is important to remember that even if you are not legally mandated to report a family, you can still help support them by referring them to community-based resources and services.

Professional Role

The individuals listed above are operating in their professional role and are therefore legally mandated to report suspected child abuse or maltreatment whenever they are practicing their
profession. For example, a doctor who is examining a child in their practice and has a reasonable suspicion that the child is experiencing abuse MUST report their concern. In contrast, a doctor who witnesses child abuse when riding their bike while off-duty is not legally mandated to report that abuse, but may choose to report. The mandated reporter’s legal responsibility to report suspected child abuse or maltreatment ceases when the mandated reporter stops practicing their profession (NYSOCFS, 2024).

Reasonable Cause to Suspect

Reasonable cause to suspect child abuse or maltreatment means that, based on your factual observations, professional training, and experience, you have a suspicion that a parent or other person legally responsible for a child is responsible for harming that child or placing that child in imminent danger of harm. Your suspicion can be as simple as distrusting an explanation for an injury (NYSOCFS, 2024).

Making a Report

As soon as you have reasonable cause to suspect abuse or maltreatment, you must report your concerns by telephone to your state’s central register of child maltreatment. The timeliness of your call is vital to the timeliness of intervention by the local department of social services’ child protective services (CPS) unit. Typically, CPS must make contact with the child and family within 24 hours after a report is made. In situations where the child is at immediate risk of harm, contacting the police may also be necessary to protect the child, as it could be several hours before a CPS investigator can initiate contact.

You are not required to notify the parents or other persons legally responsible either before or after making a report. In fact, in some cases, alerting the parent may hinder the CPS investigation and adversely affect its ability to assess the children’s safety.

There may be times when you have very little information on which to base your suspicion of abuse or maltreatment, but this should not prevent you from making a report if you believe you have reasonable cause. When calling, a trained specialist will help to determine if the information you are providing can be registered as a report.

If you call to report suspected maltreatment but the call-center staff does not register the child maltreatment report, the reason for their decision should be clearly explained to you. You may also request to speak to a supervisor, who can help make determinations in difficult or unusual cases. As long as you provide all the information to the call center, even if the call center staff decides not to register a report, you have fulfilled your responsibility as a mandated reporter (NYSOCFS, 2024).

Legal Protection or Liability for Mandated Reporters

Source Confidentiality: Social services law provides confidentiality for mandated reporters and all sources of child abuse and maltreatment reports. CPS units are not permitted to release any data that would identify the source of a report to the subject of the report unless the source has given written permission for them to do so. Information regarding the source of the report may be shared with court officials, police, and district attorneys, but only in certain circumstances.

Immunity From Liability: If a mandated reporter makes a report with earnest concern for the welfare of a child, they are immune from any criminal or civil liability that might result. This is referred to as making a report in "good faith."

Protection From Retaliatory Personnel Action: No medical or other public or private institution, school, facility, or agency shall take any retaliatory personnel action against an employee who made a report. Furthermore, no school, school official, child care provider, foster care provider, or mental health facility provider shall impose any conditions, including prior approval or prior notification, upon a member of their staff mandated to report suspected child abuse or maltreatment.

Penalties for Failure to Report: Anyone who is mandated to report suspected child abuse or maltreatment — and fails to do so — could be charged with a Class A misdemeanor and subject to criminal penalties. Further, mandated reporters can be sued in a civil court for monetary damages for any harm caused by the mandated reporter's failure to report (NYSOCFS, 2024).

> New York State Office of Children and Family Services offers a free self-directed online Mandated Reporter Training in Child Abuse and Neglect/Maltreatment Identification at https://www.nysmandatedreporter.org

Candela Citations

CC licensed content, Original

- Child Maltreatment. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...-maltreatment/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Violence and Abuse. **Authored by**: Cathy Matresse. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/sa...nce-and-abuse/. **License**: CC BY: Attribution
- Sexual Abuse in Middle Childhood. **Authored by**: Stephanie Loalada. **Provided by**: Lumen Learning. **License**: CC BY: Attribution
- Lifespan Development. **Authored by**: Martha Lally and Suzanne Valentine-French. **Provided by**: College of Lake County Foundation. **Retrieved from**: http://dept.clcillinois.edu/psy/Life...evelopment.pdf. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

Public domain content

- What is Child Abuse and Neglect? . **Provided by**: Child Welfare Information Gateway. **Retrieved from**: https://www.childwelfare.gov/pubs/fa.../whatiscan.cfm. **License**: CC0: No Rights Reserved
- What are Child Abuse and Neglect? . **Provided by**: Centers for Disease Control and Prevention. **Retrieved from**: https://youtu.be/6kcKX2In0B0. **License**: CC0: No Rights Reserved
- Summary Guide for Mandated Reporters in New York State . **Provided by**: New York State Office of Children and Family Services [NYSOCFS]. **Retrieved from**: https://ocfs.ny.gov/publications/Pub...FS-Pub1159.pdf. **License**: Public Domain: No Known Copyright

This page titled 10.3: Child Maltreatment is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

10.4: Stress and Development

What is the impact of stress on development? The answer to that question is complex and depends on several factors, including the number of stressors, the duration of stress, and the individual's ability to cope with stress.

Children experience different types of stressors that could be manifest in various ways. Everyday stress can provide an opportunity for individuals to build coping skills and poses little risk to development. Even long-lasting stressful events, such as changing schools or losing a loved one, can be managed reasonably well.

Some experts have theorized that there is a point where prolonged or excessive stress becomes harmful and can lead to serious health effects. When stress builds up in childhood, neurobiological factors are affected; in turn, levels of the stress hormone cortisol exceed normal ranges. Due in part to the biological consequences of excessive cortisol, children can develop physical, emotional, and social symptoms. Physical conditions include cardiovascular problems, skin conditions, susceptibility to viruses, headaches, or stomach aches in young children. Emotionally, children may become anxious or depressed, violent, or feel overwhelmed. Socially, they may become withdrawn and act out towards others, or develop new behavioral ticks such as biting nails or picking at skin.

Types of Stress



Researchers have proposed three distinct types of responses to stress in young children: positive, tolerable, and toxic. Positive stress (also called eustress) is necessary and promotes resilience, or the ability to function competently under threat. Such stress arises from brief, mild to moderate stressful experiences, buffered by the presence of a caring adult who can help the child cope with the stressor. This type of stress causes minor, temporary physiological and hormonal changes in the young child, such as an increase in heart rate and a change in hormone cortisol levels. The first day of school, a family wedding, or making new friends are all examples of positive stressors. Tolerable stress comes from adverse experiences that are more intense but short-lived and can usually be overcome. Some examples of tolerable stressors are family disruptions, accidents, or the death of a loved one. The body's stress response is more intensely activated due to severe stressors; however, the response is still adaptive and temporary.

Toxic stress is a term coined by pediatrician Jack P. Shonkoff of the Center on the Developing Child at Harvard University to refer to chronic, excessive stress that exceeds a child's ability to cope, especially in the absence of supportive caregiving from adults. Extreme, long-lasting stress in the absence of supportive relationships to buffer the effects of a heightened stress response can produce damage and weakening of bodily and brain systems, which can lead to diminished physical and mental health throughout a person's lifetime. Exposure to such toxic stress can result in the stress response system becoming more highly sensitized to stressful events, producing increased wear and tear on physical systems through over-activation of the body's stress response. This wear and tear increases the later risk of various physical and mental illnesses.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 10.5.1. Toxic Stress Derails Healthy Development explains some of the biological changes that accompany toxic stress.

Adverse Childhood Experiences

The toxic stress that children endure can have a significant impact on their later lives. According to Merrick, Ford, Ports, and Guinn (2018), the foundation for lifelong health and well-being is created in childhood, as positive experiences strengthen biological systems while adverse experiences can increase mortality and morbidity **Adverse Childhood Experiences**, or ACEs, are potentially traumatic events that occur in childhood (0-17 years) such as experiencing violence, abuse, or neglect; witnessing violence in the home; and having a family member attempt or die by suicide. Also included are aspects of the child's environment that can undermine their sense of safety, stability, and bonding such as growing up in a household with substance misuse, mental health problems, or instability due to parental separation or incarceration of a parent, sibling, or another member of the household. Traumatic events in childhood can be emotionally painful or distressing and can have effects that persist for years.2 Factors such as the nature, frequency, and seriousness of the traumatic event, prior history of trauma, and available family and community supports can shape a child's response to trauma.

Some groups have been found to be at a greater risk for experiencing ACEs. Merrick et al. (2018) reviewed the results from the 2011-2014 Behavioral Risk Factor Surveillance System, which included an ACE module consisting of questions adapted from the Centers for Disease Control and Prevention. Each question was collapsed into one of the eight ACE categories: physical abuse, emotional abuse, sexual abuse, household mental illness, household substance use, household domestic violence, incarcerated household member, and parental separation or divorce. The results indicated that 25% of the sample had been exposed to three or more ACEs, and although ACEs were found across all demographic groups, those who identified as Black, multiracial, lesbian/gay/bisexual, having less than a high school education, being low income, and unemployed experienced significantly higher ACE exposure. Assisting families and providing children with supportive and responsive adults can help prevent the negative effects of ACEs.

Consequences of ACEs and Toxic Stress

An estimated 62% of adults surveyed across 23 states reported that they had experienced one ACE during childhood and nearly one-quarter reported that they had experienced three or more ACEs. ACEs can have negative, lasting effects on health, wellbeing, and opportunity. These exposures can disrupt healthy brain development, affect social development, compromise immune systems, and can lead to substance misuse and other unhealthy coping behaviors. The evidence confirms that these exposures increase the risks of injury, sexually transmitted infections, including HIV, mental health problems, maternal and child health problems, teen pregnancy, involvement in sex trafficking, a wide range of chronic diseases and the leading causes of death such as cancer, diabetes, heart disease, and suicide. ACEs can also negatively impact education, employment, and earnings potential. The total economic and social costs to families, communities, and society is in the hundreds of billions of dollars each year.

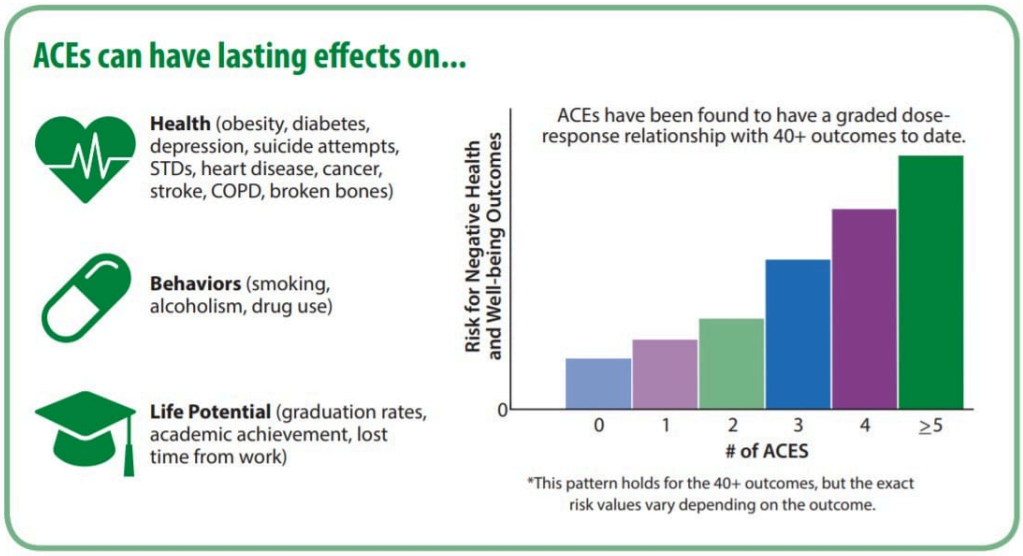


Figure 10.5.1. Risk of outcomes due to adverse childhood experiences.

Children who experience toxic stress or who live in extremely stressful situations of abuse over long periods can suffer long-lasting effects. The structures in the midbrain or limbic system, such as the hippocampus and amygdala, can be vulnerable to prolonged stress (Middlebrooks and Audage, 2008). High levels of the stress hormone cortisol can reduce the size of the hippocampus and affect a child's memory abilities. Stress hormones can also reduce immunity to disease. If the brain is exposed to long periods of severe stress, it can develop a low threshold, making a child hypersensitive to stress in the future.

With chronic toxic stress, children undergo long-term hyper-arousal of brain stem activity. This activity includes an increase in heart rate, blood pressure, and arousal states. These children may experience a change in brain chemistry, which leads to hyperactivity and anxiety. Therefore, it is evident that chronic stress in a young child's life can create significant physical, emotional, psychological, social, and behavioral changes; however, the effects of stress can be minimized if the child has the support of caring adults.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 10.5.2. How Childhood Trauma Affects Health Across a Lifetime discusses the development of an ACE assessment and the research results on outcomes.

Separating Families At the U.S. Border

Thousands of children were separated from their parents beginning in April 2018 as they approached the United States border by Immigration and Customs Enforcement (ICE). Children were placed in separate facilities from their parents when they were being processed, and they were not told when they would be reunited. When enduring stressful situations, separation from one's parents can be extremely detrimental to a child (Society for Research in Child Development (SRCD), 2018). Parental separations affect children's stress management systems by changing how the body responds to stress. Long-term stress can disrupt brain functioning, cognitive skills, emotional processing, and physiological health. When exposed to stress, children typically look to their parents for support and care, and parents can reduce children's stress. These

separated children were already under extreme stress escaping their previous homes and then were separated from the individuals who could support them through this process. Stress from parent separation places children at a higher risk for anxiety, depression, PTSD, lower IQ, obesity, impaired immune system functioning, and medical conditions (SRCD, 2018). Even after being reunited, children can experience attachment issues, poorer self-esteem, and physical and psychological health difficulties. As they age, they continue to exhibit an increased risk for mental health problems, problems in social interactions, difficulty with adult attachments, poorer stress management, and an increased risk for death. The American Psychological Association (2019) opposes policies that separate families, given the negative outcomes suffered by children.

Preventing ACEs

The Centers for Disease Control and Prevention (2019) suggests several strategies that can prevent ACEs from happening in the first place, as well as strategies to mitigate the harms of ACEs. The evidence tells us that ACEs can be prevented by strengthening economic supports for families, promoting social norms that protect against violence and adversity, ensuring a strong start for children and paving the way for them to reach their full potential, teaching skills to help parents and youth handle stress, manage emotions, and tackle everyday challenges. Connecting youth to caring adults and activities, and intervening to lessen immediate and long-term harm.

Preventing ACEs

Strategy	Approach
Strengthen economic supports to families	• Strengthening household financial security • Family-friendly work policies
Promote social norms that protect against violence and adversity	• Public education campaigns • Legislative approaches to reduce corporal punishment • Bystander approaches • Men and boys as allies in prevention
Ensure a strong start for children	• Early childhood home visitation • High-quality child care • Preschool enrichment with family engagement
Teach skills	• Social-emotional learning • Safe dating and healthy relationship skill programs • Parenting skills and family relationship approaches
Connect youth to caring adults and activities	• Mentoring programs • After-school programs
Intervene to lessen immediate and long-term harms	• Enhanced primary care • Victim-centered services • Treatment to lessen the harms of ACEs • Treatment to prevent problem behavior and future involvement in violence • Family-centered treatment for substance use disorders

Figure 10.5.2. Strategies for preventing adverse childhood experiences.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 10.5.3. Preventing ACEs discusses how communities can reduce the risk for adverse childhood experiences.

Coping with Stress

Stress is encountered in four different stages. In the first stage, stress usually causes alarm. Next, in the second or appraisal stage, the person attempts to find meaning from the event. Stage three consists of the individual seeking out coping strategies.

Lastly, in stage four, people execute one or more of the coping strategies. However, individuals with a lower tolerance for stressors are more susceptible to alarm and find a broader array of events to be stressful. These children often experience chronic or toxic stress.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 10.5.4. The Science of Resilience describes a variety of factors involved in the development of resilience.

Some recommendations to help children manage stressful situations include:

- Preparing children for everyday stressful situations, such as traveling to new places or going to the doctor. For example, talk to children about the experience to help them understand that it is okay to be stressed and scared.
- Keeping communication open. This includes making sure that the child feels comfortable talking to a person. This may include being in a comfortable space, such as their bedroom, where they feel safe. The child's comfort level is important because if a child is uncomfortable or feels forced to speak, they may not open up at all.
- Spending time together as a family ensures that no one's feelings go unseen and that children know that their feelings are valued and should be expressed in healthy ways.
- Modeling healthy and successful coping mechanisms (such as going for a walk).
- Encourage children to express themselves creatively (as an outlet or to help others understand what is stressing the child). Some healthy stress relief outlets include sports or running, writing, reading, art, and playing musical instruments.
- Teaching children to act and think positively when they are faced with a situation, to manage the stress before it becomes overwhelming.
- Providing a safe and healthy home and environment for children.
- Providing children with proper nutrition and attention.
- Ensuring children are not exposed to substance abuse or violence. When a healthy environment is provided, children are more likely to be emotionally and physically healthy.

Watch It

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 10.5.5. Trauma-Informed Practices to Support Learning explains how one school placed a strong focus on relationships, social and emotional learning, and understanding students' mental health informs how Fall-Hamilton's staff interacts with students.

Candela Citations

CC licensed content, Original

- Stress and Development. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College.

Retrieved from: https://courses.lumenlearning.com/ad...d-development/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Childhood Stress and Development. **Authored by**: Stephanie Loalada. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...d-development/. **License**: CC BY-SA: Attribution-ShareAlike
- Lifespan Development. **Authored by**: Martha Lally and Suzanne Valentine-French. **Provided by**: College of Lake County Foundation . **Retrieved from**: http://dept.clcillinois.edu/psy/Life...evelopment.pdf. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

All rights reserved content

- How Childhood Trauma Affects Health Across a Lifetime. **Authored by**: Nadine Burke Harris. **Provided by**: TED. **Retrieved from**: https://youtu.be/95ovIJ3dsNk. **License**: All Rights Reserved
- Fall-Hamilton Elementary: Transitioning to Trauma-Informed Practices to Support Learning. **Provided by**: Edutopia. **Retrieved from**: https://youtu.be/iydalwamBtg. **License**: All Rights Reserved

Public domain content

- We Can Prevent ACEs. **Provided by**: Center for Disease Control and Prevention. **Retrieved from**: https://youtu.be/8gm-lNpzU4g. **License**: Public Domain: No Known Copyright

This page titled 10.4: Stress and Development is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

adverse childhood experiences: abuse, neglect, and violent experiences that contribute to childhood trauma

athletic coach style of parenting: the rules for behavior are consistent and objective and presented in that way. The parent's role is to provide guidance while the child learns first hand how to handle these situations

authoritarian parenting: the traditional model of parenting in which parents make the rules and children are expected to be obedient

authoritative parenting: appropriately strict, reasonable, and affectionate. They are willing to negotiate when appropriate

false self-training: holding a child to adult standards while denying the child's developmental needs

martyr parent: a parent who will do anything for the child, even tasks that the child should do independently, may later use what they have done for the child to invoke guilt and compliance

pal parent: wants to be the child's friend and focuses on being entertaining and fun

permissive parenting: involves being a friend to a child rather than an authority figure. Children are allowed to make their own rules and determine their own activities

police officer/drill sergeant parent: focuses primarily on making sure that the child is obedient and that the parent has full control of the child

teacher-counselor parent: pays much attention to expert advice on parenting and believes that as long as all of the steps are followed, the parent can rear a perfect child

toxic stress: excessive stress that exceeds a child's ability to cope, especially in the absence of supportive caregiving from adults

uninvolved parenting: parents who are disengaged from their children, do not make demands on their children, and are non-responsive

This page titled 10.5: Glossary is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

11: CHANGING PEER RELATIONSHIPS

Learning Objectives

- Describe changes in peer relationships during adolescence
- Identify the sociometric peer statuses and characteristics of each
- Explain the types of bullying and factors that contribute to bullying behavior
- Describe the developmental benefits of dating
- Explain teen dating violence and factors that contribute to this behavior

Parent-child relationships are not the only significant relationships in a child's life. Peer relationships are also important. Social interaction with another child who is similar in age, skills, and knowledge provokes the development of many social skills that are valuable for the rest of life (Bukowski, Buhrmester, & Underwood, 2011). In peer relationships, children learn how to initiate and maintain social interactions with other children. They learn skills for managing conflicts, such as turn-taking, compromise, and bargaining. Through these experiences, children develop friendships that provide additional sources of security and support to those provided by their parents. These relationships become even more prominent during adolescence.

11.1: Peer Relationships

11.2: Sociometric Peer Status

11.3: Bullying

11.4: Teen Dating

11.5: Glossary

This page titled 11: Changing Peer Relationships is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

11.1: Peer Relationships

As children become adolescents, they usually begin spending more time with their peers and less time with their families, and these peer interactions are increasingly unsupervised by adults. Children's notions of friendship often focus on shared activities, whereas adolescents' notions of friendship increasingly focus on intimate exchanges of thoughts and feelings.

During adolescence, peer groups evolve from primarily single-sex to mixed-sex. Adolescents within a peer group tend to be similar to one another in behavior and attitudes, which has been explained as being a function of **homophily** (adolescents who are similar to one another choose to spend time together in a "birds of a feather flock together" way) and influence (adolescents who spend time together shape each other's behavior and attitudes).

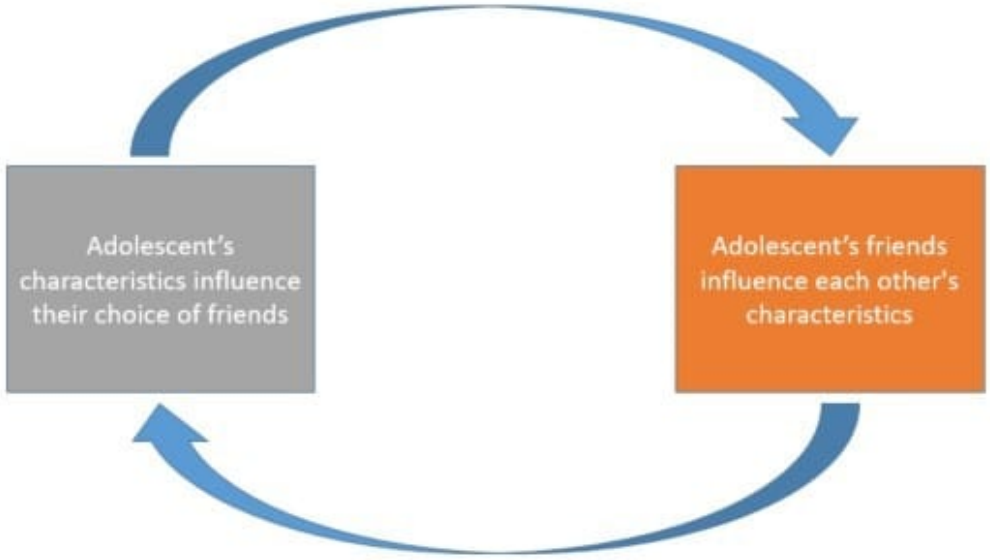


Figure 11.2.1. Reciprocal influences on friend selection and personal characteristics.

Peer pressure is usually depicted as peers pushing a teenager to do something that adults disapprove of, such as breaking laws or using drugs. One of the most widely studied aspects of adolescent peer influence is known as **deviant peer contagion** (Dishion & Tipsord, 2011). This influence is the process by which peers reinforce problem behavior by laughing or showing other signs of approval that then increase the likelihood of future problem behavior. Although deviant peer contagion is more extreme, regular peer pressure is not always harmful. Peers can serve both positive and negative functions during adolescence. Negative peer pressure can lead adolescents to make riskier decisions or engage in more problematic behavior than they would alone or in the presence of their family. For example, adolescents are much more likely to drink alcohol, use drugs, and commit crimes when they are with their friends than when they are alone or with their family. However, peers also serve as an essential source of social support and companionship during adolescence, and adolescents with positive peer relationships are happier and better adjusted than those who are socially isolated or who have conflictual peer relationships.

Crowds are an emerging level of peer relationships in adolescence. In contrast to friendships (which are reciprocal dyadic relationships) and **cliques** (which refer to groups of individuals who interact frequently), crowds are characterized more by shared reputations or images than actual interactions (Brown & Larson, 2009)These crowds reflect different prototypic identities (such as jocks or brains) and are often linked with adolescents' social status and peers' perceptions of their values or behaviors. Eventually, these crowds and cliques become less critical to teens as they place more value on close friendships and romantic relationships.

Crowds

Crowds are large groups of adolescents socially connected by a shared image and reputation (Brown, 2004), especially within the setting of a single school. A single person can belong to more than one crowd if their image matches the crowds' criteria (Brown, 2004; Mory, 1994). Because membership in a crowd depends on peers' perceptions, crowds in any given peer group

will correspond to the local preconceived “types” of adolescents. Specific stereotypes vary from place to place, but many remain consistent. They are based on peer status, socioeconomic status, residential area, activities, social characteristics, or a combination of attributes (jocks, nerds, populars, and druggies are among the most commonly observed) (Brown, 2004; Mory, 1994; Arnett, 2002). Crowds are very different from cliques: while cliques are relatively small, close-knit groups based on frequent interaction and collectively determined membership, members of a crowd may not even know each other. Crowd membership reflects external assessments and expectations, providing a social context for identity exploration and self-definition as adolescents internalize or reject their crowd identities.

Because crowd membership is initially outwardly imposed, an adolescent’s peers can classify them as belonging to a crowd that they do not consider themselves a member. Members of some crowds are more aware of and comfortable with their crowd designation than others; members of stigmatized or low-status groups, in particular, may resist or deny their undesirable categorization (Brown et al., 1992). Usually, however, adolescents embrace their crowd affiliation, using it to define themselves and advertise where they fit in their peer group’s social structure (Newman & Newman, 2001; Brown et al., 1990).

Crowds and Identity Development

Crowds serve an essential purpose in adolescent identity development, shaping individual values, behavior, and personal and peer expectations. “[One’s group] is often tantamount to one’s own provisional identity” (Brown et al., 1994); the individual defines themself by the crowd to which they see themself belonging. Different crowds expose the individual to different norms. These norms encourage adolescents to interact with some people while avoiding others and reward certain behaviors while discouraging others, a process of normative social influence (Brown et al., 1990; Brown et al., 1994; Brown et al., 1995; Brown & Larson, 2009). For example, a member of a “preppy” crowd might be rewarded for dressing in a fashion for which a member of an “emo” crowd would be teased, and vice versa.

Crowd effects on norms of interaction:

- Norms affect how the individual interacts with others. Members of high-status (preppie, popular) groups often interact with many people, but most of these relationships are superficial and instrumental; interpersonal connections are used to establish and maintain social status (Eder, 1985; Lesko, 1988). By contrast, members of lower-caste groups (e.g., dorks, druggies) generally have fewer friends, mostly from within the crowd; however, these relationships are typically marked by greater loyalty, stability, and honesty (Lesko, 1988).
- Norms affect with whom the individual interacts. Crowds steer the individual toward certain people, attitudes, and behaviors. There are also effects of peer perception and expectations when individuals attempt to interact across crowds. In essence, one may be interested in a cross-crowd friendship, but whether or not the target reciprocates depends on their crowd’s norms as well. The adolescent’s social options for friendship and romance are limited by their crowd and by other crowds (Brown et al., 1994).

Often crowds reinforce the behaviors that initially caused an individual to be labeled part of that crowd, which can positively or negatively influence the individual (toward academic achievement or drug use, for example). These pressures are often linked to the stereotypes members of crowds hold about themselves and members of other crowds: unity by the denigration of the outgroup (Brown et al., 1994).

Racial Crowds and Sub-Crowds

Adolescents’ perception of crowd differences may depend on how closely related the adolescent observer is to a particular crowd. The primary, recurring crowd divisions (jocks, geeks, partiers) have been most often studied in predominantly white high schools, but they also exist for minority students. In multiracial schools, students seem to divide along ethnic lines first, then into these archetypical crowds within their ethnicity. However, one ethnic group may not notice the further divisions in other ethnic groups after the first, race-based split (Brown & Mounts, 1989). For instance, black students see themselves as divided into jocks, geeks, emos, stoners, popular kids, and so on, but white students may see them as just one crowd defined solely by ethnicity, “the black kids.” Sometimes crowd membership transcends race, however, and adolescents are classified as “jocks” or “geeks” regardless of race (Horvat & Lewis, 2003; Tyson et al., 2005). This classification seems to vary and depend heavily on the context of the individual school.

Stereotypes, Stigma, and Cross-Crowd Friendships

While crowds are structured around prototypical caricatures of their members, real adolescents rarely match these extremes.

Furthermore, not all adolescents agree on the characteristics typical of a stereotype (Brown et al., 1994). In other words, a regular manifestation of just a few central characteristics of a crowd is a sufficient basis for classification as a member of that crowd. Thus, not all "jocks" neglect their schoolwork, though that is part of the typical jock stereotype, and a person interested in fashion could still be considered a "geek."

Often a crowd is stigmatized by one or more other crowds. This stigmatization can affect adolescents' willingness to associate with members of that crowd, or even other crowds similar to it. For example, people may avoid being seen as a "brain," a middle-status crowd, because of the similarity between brains and "nerds," a lower-status crowd (Brown et al., 1990).

Shared interests form the basis of many friendships, so often adolescents are drawn to members of their own crowds, especially if their crowd is defined by activities rather than more superficial characteristics such as race or socioeconomic status. However, interests can be shared across crowd divisions. Accordingly, while an adolescent's closest friends are almost always part of the same clique (i.e., they interact frequently within the same small friend group), they are not always part of the same crowd, especially if multiple crowds have similar lifestyles (Brown et al., 1994).

Crowd-Hopping

Further emphasizing the flexible nature of crowd membership, some adolescents are not stably linked to one specific crowd—some individuals are associated with multiple crowds, while others are not stably linked to any crowds and "float" among several. These appear more closely attached to individuals outside the peer group (family, dropout friends, friends from a non-school organization, etc.). Others may consciously work to change crowd affiliations to express different interests or achieve a change in social status. The crowd with which an adolescent desires to be identified is far less stable than the personal attributes by which the adolescent is likely to be categorized by peers. Accordingly, adolescents who change crowd membership (a process known as "crowd-hopping") tend to have lower self-esteem, perhaps because they have not yet found an environment and peer group that supports them. They likely continue changing crowd membership until they find a fulfilling niche (Brown et al., 1992).

The Rise of Crowds

Crowds first emerge in middle or junior high school, when children transition from stable, self-contained classroom peer groups into larger schools, where they interact with a more diverse body of peers with less adult guidance. Crowds emerge to group students by caricature and structure interactions between students of each type (Brown et al., 1994). Early crowds are often based on social status, especially among girls, with a small group of well-known children being "popular" and the rest "unpopular." To maintain their status, popular girls will avoid the overtures of less-popular children, which actually makes them disliked (Eder, 1985). Many children stop attempting to gain entry into the popular crowd and make friends with other children instead, giving rise to new crowds (Brown et al., 1994).

The stereotypes on which crowd definitions are based change over time as adolescents shift from grouping people by abstract characteristics rather than activities ("geeks" rather than "the kids who read a lot"). With age, adolescents become more conscious of crowd divisions and the social hierarchy (Brown, 2004). Distinctions between crowds also become more nuanced, developing from simple popular/unpopular dichotomies to less hierarchical structures in which there are more than two levels of social acceptability, often with several crowds at each level (Kinney, 1993; Horn, 2003). As seen in cross-crowd friendships, some crowds interact with each other more readily than others. This transition to a more fluid social structure allows adolescents to change their status over time by changing crowds, remaining in a crowd that undergoes a change in status, or gaining the confidence and perspective to reject the assumptions of the social hierarchy (Brown et al., 1994; Kinney, 1993). Willingness to do so reflects a growing sense of personal identity distinct from crowd membership.

The Decline of Crowds

Adolescents' attitudes toward crowds change over time—while ninth-graders are willing to discriminate against members of other crowds, twelfth-graders are less likely to do so (Horn, 2003). Adolescents also develop more multifaceted self-concepts and reject crowd labels as simplistic attempts to describe an entire personality (Brown et al., 1994). Across the high school years, crowd significance as a basis for affiliation wanes (Horn, 2003), as does the influence of crowds on an individual's behavior (Brown, 2004). In fact, some studies indicate the importance of crowds peaks at age 12 or 13 (Brown et al., 1986). By the end of high school, adolescents often feel constrained by impersonal, crowd-derived identities (Larkin, 1979). This constraint, combined with the splintering off of romantic couples from the rest of the crowd, may account for the decline of crowd significance over time(Kuttler & La Greca, 2004).

Cliques



A **clique** is a group of individuals who interact with one another and share similar interests. Interacting with cliques is part of normative social development regardless of gender, ethnicity, or popularity. Although cliques are most commonly studied during adolescence and middle childhood development, they exist in all age groups. They are often bound together by shared social characteristics such as ethnicity and socioeconomic status (Labrum, 2016).

Typically, people in a clique will not have a completely open friend group and can, therefore, "ban" members if they do something considered unacceptable, such as talking to someone disliked. Some cliques tend to isolate themselves as a group and view themselves as superior to others, which can be demonstrated through bullying and other antisocial behaviors.

One person may be part of multiple cliques, each forming and functioning independently from one another. Cliques are relevant in society due to the social influence or peer pressure that results from the interactions with individuals who share a common characteristic. The outcomes associated with clique formations may be endless, with varying degrees of influence (Miller, 1958). So, a formal clique, such as a professional organization, would have a different kind of influence as compared to a social clique consisting of close friends.

A clique can also involve a high degree of social commitment to a specific group. A stronger level of commitment results in an individual having a reduced amount of interaction with other social groups. Cliquish behavior often involves repetition with regard to activities, vernacular, preferences, and manner, which can result in conflict with other cliques, creating "outsiders." Individuals can also experience social isolation within their clique if their values and/or behavior begin to differ from the rest of the group.

Every clique has some form of organization that makes up the network of social interaction (Peay, 1974). Informal clique networks are groups that do not have a legitimate organizational structure in which they can be established and dissolved in a shorter period. An informal clique may consist of a person's friend group or co-workers, while it may also identify other, more informal groups, such as criminal gangs (Krackhardt, 1988). On the other hand, a formal clique is a group with a socially accepted organization that is hierarchical in structure. A formal clique is composed of members who have identifiable roles and interactions with one another and is found in the structure of numerous professional organizations, businesses, and even family structure. Culture is a very influential factor in the organization of clique structures because the boundaries established through differences in cultural aspects are persistent, even when the membership varies from time to time. For example, the differences in language, beliefs, traditions, etc. have always created a distinct separation or boundary between groups of people even though the members of that particular group are continually changing (Barth, 1998).

Development of Cliques

The formation and deformation of clique structures do not end with adolescence, even though the number of interactions with clique groups decreases, and the type of groups may change. As individuals become adults, their social interpretations alter, and the formation of their cliques originates from their immediate environment, rather than from common social characteristics (Carstensen, 2016). A clique should not be confused with a crowd because the smaller size and specific boundaries of a group are what causes the group formation to be considered a clique. A clique can develop in several different ways and within environments

that consist of individuals who interact regularly. The structural cohesion of the clique is the constant face-to-face interaction between members that can either create or dissolve the group, depending upon the level of interaction. If face-to-face interaction is regularly established, then cohesion between individuals will form. However, if the face-to-face interaction depreciates, then the cohesive social bond between said individuals will eventually dissolve (Friedkin, 1984).

Social impact of Cliques

A clique may inhibit external social influence by impacting the emotions, opinions, or behaviors of group members (Hochschild, 1979). There are many ways in which the perception of information between members in a clique can influence other members on a greater level than if they had received the same information from a different source. For example, receiving information from a close friend or family member is interpreted and responded to differently compared to receiving the same information from someone who is not within the clique structure. The satisfaction, interaction, and closeness between the clique groups that we involve ourselves in develops and changes throughout the years. Nevertheless, there is always a constant morphing of both the individual and the group as time goes on.

Homosociality to Heterosociality

Homosociality is the relationship between people of the same-sex, not romantic in nature. In children and young adolescence, more friendships are with peers of the same sex. As adolescents mature, they become open to **heterosociality**, having relationships with people of the opposite sex, and **bisociality**, having relationships with same- and opposite-sex peers.

This process tends to occur in stages, as children transition from almost exclusive homosociality to heterosociality and eventually to romantic relationships. In stage one of this progression, cliques are same-sex and segregated from the opposite sex. In the second stage, opposite-sex cliques with similar interests start to associate. During the third stage, sex-segregated cliques break down, often with clique leaders pairing off into close friendships and romantic relationships. The fourth stage is when other clique members also leave the homosocial clique for hetero- and bisocial or romantic relationships. By stage five, cliques are less important to teens, and close or romantic relationships are the priority.

Cliques, Crowds, and Conformity

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 11.2.1. Adolescence, Cliques, Crowds, Conformity discusses the different peer groups and the influence on youth culture.

Close Friendships

Peer relationships are particularly important for children. They can be supportive but also challenging. Peer rejection may lead to behavioral problems later in life. However, peer relationships can be challenging, as well as supportive (Rubin, Coplan, Chen, Bowker, & McDonald, 2011). Being accepted by other children is an essential source of affirmation and self-esteem. At the same time, peer rejection can foreshadow later behavior problems (especially when children are rejected due to aggressive behavior). With increasing age, children confront the challenges of bullying, peer victimization, and managing conformity pressures. Social comparison with peers is an important means by which children evaluate their skills, knowledge, and personal qualities, but it may cause them to feel that they do not measure up well against others. For example, a boy who is not athletic may feel unworthy of his football-playing peers and revert to shy behavior, isolating himself, and avoiding conversation. Conversely, an athlete who does not “get” Shakespeare may feel embarrassed and avoid reading altogether. Also, with the approach of adolescence, peer relationships become focused on psychological intimacy, involving personal disclosure, vulnerability, and loyalty (or its betrayal)—which significantly influences a child’s outlook on the world. Each of these aspects of peer relationships requires

developing very different social and emotional skills than those that emerge in parent-child relationships. They also illustrate the many ways that peer relationships influence the growth of personality and self-concept.

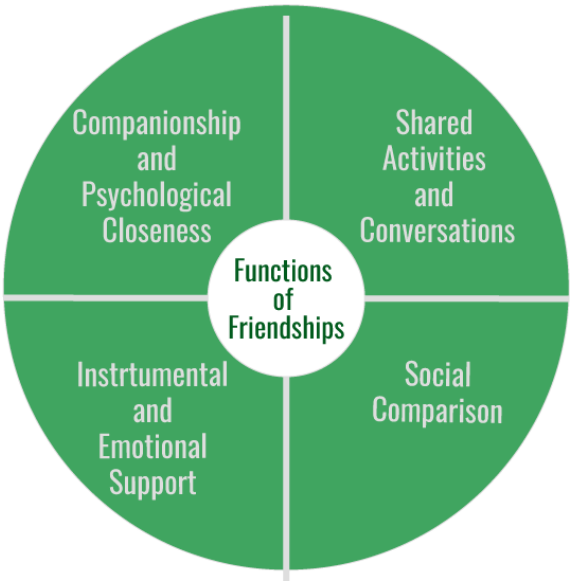


Figure 11.2.2. Functions of friendship. By Florida State College at Jacksonville, licensed under CC-BY 4.0 .

Romantic Relationships

Adolescence is the developmental period during which romantic relationships typically first emerge. Initially, same-sex peer groups that were common during childhood expand into mixed-sex peer groups that are more characteristic of adolescence. Romantic relationships often form in the context of these mixed-sex peer groups (Connolly, Furman, & Konarski, 2000).

Although romantic relationships during adolescence are often short-lived rather than long-term committed partnerships, their importance should not be minimized. Adolescents spend a great deal of time focused on romantic relationships, and their positive and negative emotions are more tied to romantic relationships (or lack thereof) than to friendships, family relationships, or school (Furman & Shaffer, 2003). Romantic relationships contribute to adolescents' identity formation, changes in family and peer relationships, and adolescents' emotional and behavioral adjustment.

Furthermore, romantic relationships are centrally connected to adolescents' emerging sexuality. Parents, policymakers, and researchers have devoted a great deal of attention to adolescents' sexuality, in large part because of concerns related to sexual intercourse, contraception, and preventing teen pregnancies. However, sexuality involves more than this narrow focus. Romantic relationships are a domain in which adolescents experiment with new behaviors and identities.

Try It

https://assessments.lumenlearning.co...essments/16621

Candela Citations

CC licensed content, Original

- Peer Relationships. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...relationships/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Social Development During Adolescence . **Authored by**: Tera Jones. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/wm...g-adolescence/. **License**: CC BY-SA: Attribution-ShareAlike

- Play, Leisure, and Peer Relationships. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/at...relationships/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike
- Cliques. **Provided by**: Wikipedia. **Retrieved from**: https://en.wikipedia.org/wiki/Clique. **License**: CC BY: Attribution

All rights reserved content

- Adolescence, Cliques, Crowds, Conformity. **Retrieved from**: https://youtu.be/tFt8IBwcNTg. **License**: All Rights Reserved

This page titled 11.1: Peer Relationships is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

11.2: Sociometric Peer Status

A teen's status among their peers will influence their membership in peer groups and their ability to make friends. **Sociometric status** is a measurement that reflects the degree to which someone is liked or disliked by their peers as a group. In developmental psychology, this system has been used to examine children's status in peer groups, its stability over time, the characteristics that determine it, and the long-term implications of one's popularity or rejection by peers.

The most commonly used sociometric system, developed by Coie & Dodge (1988), asks children to rate how much they like or dislike each of their classmates and uses these responses to classify them into five groups.

		Number of "least liked" nominations		
		Many		Few
Number of "most liked" nominations	Many	Controversial		Popular
			Average	
	Few	Rejected		Neglected

Figure 11.3.1. Sociometric peer statuses.

Popular adolescents are those liked by many of their peers and disliked by few. These individuals are skilled at social interactions and maintain positive peer relationships. They tend to be cooperative, friendly, sociable, and sensitive to others. They are capable of being assertive without being aggressive, thus can get what they want without harming others. Among this group, there may be distinct levels of popularity:

- **Accepted** teens are the most common sub-group among the popular. While they are generally well-liked, they are not as magnetic as the very popular kids.
- **Very popular** teens are highly charismatic and draw peers to them.

Rejected teens are designated as rejected if they receive many negative nominations and few positive nominations. These individuals often have poor academic performance and more behavior problems in school. They are also at higher risk for delinquent behaviors and legal problems. These kids are more likely to be diagnosed with ADHD, conduct disorder, and substance abuse. They tend to be isolated, lonely and are at risk for depression. Rejected youth can be categorized into two types:

- **Aggressive-rejected** teens display hostile and threatening behavior, are physically aggressive, and disruptive. They may bully others, withhold friendship, ignore and exclude others. While they are lacking, they tend to overestimate their social competence.
- **Withdrawn-rejected** teens are socially withdrawn, wary, timid, anxious in social situations, and lack confidence. They are at risk of being bullied.

Individuals that are liked by many peers, but also dislike by many are designated as **controversial**. This group may possess characteristics of both the popular and the rejected group. These individuals tend to be aggressive, disruptive, and prone to anger. However, they may also be cooperative and social. They are often socially active and a good group leader. Their peers often view them as arrogant and snobbish.

The **neglected** teens are designated as neglected if they receive few positive or negative nominations. These children are not especially liked or disliked by peers and tend to go unnoticed. As a result, they may be isolated and especially avoid confrontation or aggressive interactions. This group does tend to do well academically.

Finally, the **average** teens are designated as such because they receive an average number of both positive and negative nominations. They are liked by a small group of peers, but not disliked by very many.

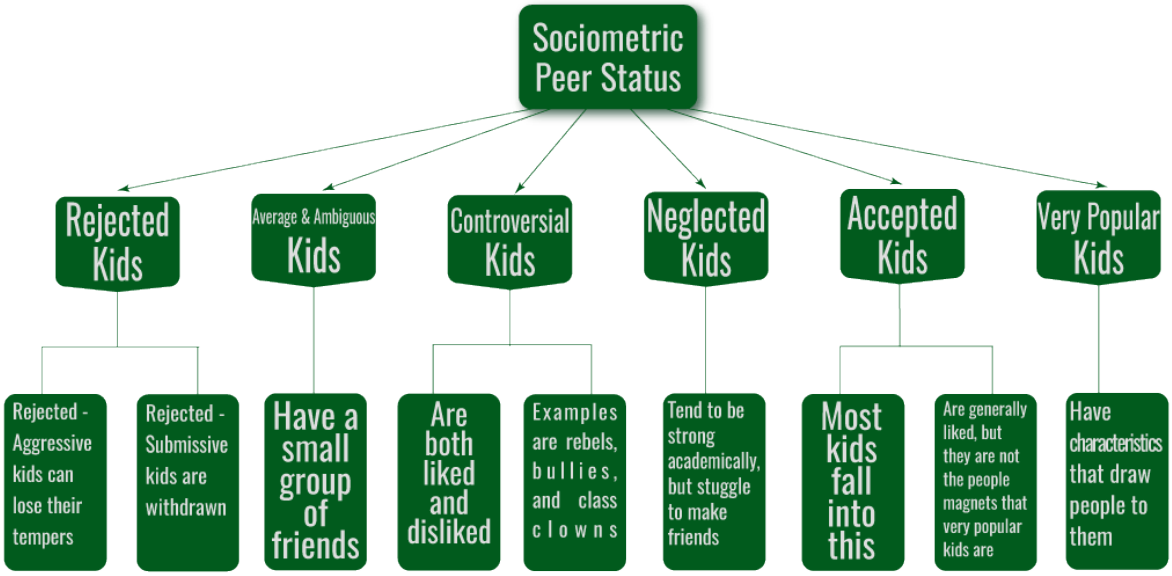


Figure 11.3.2. Sociometric peer statuses and characteristics.

Popularity

What makes an adolescent popular? Several physical, cognitive, and behavioral factors impact popularity. First, adolescents that are perceived to be physically attractive tend to be more popular among their peers. Cognitive traits matter too. Individuals that demonstrate higher intelligence and do well academically tend to be more liked. Also, those that can take another's perspective and demonstrate social problem-solving skills are favored. Teens that can manage their emotions and behave appropriately gain higher status. Finally, teens like peers that are confident without being conceited.

Interventions

What can be done to help those adolescents that are not well-liked? For neglected teens, social skills training and encouraging them to join activities can help them become noticed by their peers and make friends. For rejected teens, they may need support to help with anger management, to overcome anxiety, and cope with depression. This group can also benefit from social skills training to learn social competence and gain confidence.

Candela Citations

CC licensed content, Original

- Sociometric Peer Status. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...c-peer-status/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Play, Leisure, and Peer Relationships. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/at...relationships/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

This page titled 11.2: Sociometric Peer Status is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

11.3: Bullying

Bullying is unwanted, aggressive behavior among school-aged children that involves a real or perceived power imbalance. The behavior is repeated, or has the potential to be repeated, over time. Both kids who are bullied and who bully others may have serious, lasting problems.

In order to be considered bullying, the behavior must be aggressive and include:

- An Imbalance of Power: Kids who bully use their power—such as physical strength, access to embarrassing information, or popularity—to control or harm others. Power imbalances can change over time and in different situations, even if they involve the same people.
- Repetition: Bullying behaviors happen more than once or have the potential to happen more than once.

Bullying includes actions, such as making threats, spreading rumors, attacking someone physically or verbally, and excluding someone from a group on purpose. Bullying is not peer conflict, dating violence, hazing, gang violence, harassment (legal definition), or stalking. While these issues may also be problematic, they do not meet the criteria for bullying behavior.

Types of Bullying

There are several types of bullying, and it is not unusual for a bully to utilize more than one type. **Verbal bullying is** saying, or writing mean things and may include behaviors like teasing or name-calling, inappropriate sexual comments, taunting, and threatening to cause harm. **Social bullying is** sometimes referred to as relational bullying. It involves behaviors such as hurting someone's reputation or relationships by purposely excluding them or getting others to exclude them, spreading rumors about someone, or embarrassing someone in public. **Physical bullying is** hurting a person's body or possessions by hitting, kicking, or pinching, spitting, tripping or pushing, taking or breaking someone's things, or making mean or rude hand gestures.

The Roles in Bullying

There are many roles that individuals may take in bullying situations. Kids can bully others, they can be bullied, or they may witness bullying. Some may play more than one role, sometimes being both bullied and the bully. It is important to understand the multiple roles involved in these situations in order to prevent and respond to bullying effectively.

Importance of Not Labeling Kids

When referring to a bullying situation, it is easy to call the kids who bully others "bullies" and those who are targeted "victims," but this may have unintended consequences. When children are labeled as "bullies" or "victims," it may send the message that the individual's behavior cannot change. It also fails to recognize the multiple roles one might play in different bullying situations. Labeling also disregards other factors contributing to the behavior such as peer influence or school climate.

Instead of labeling the teens involved, focus on the behavior. For instance, instead of calling someone a "bully," refer to them as "the person who bullied." Instead of calling a person a "victim," refer to them as "the person who was bullied."

The Role of Bully

The roles individuals play in bullying are not limited to those who bully others and those who are bullied. Some researchers talk about the "circle of bullying" to define both those directly involved in bullying and those who actively or passively assist the behavior or defend against it. Direct roles include:

- **Those who Bully**: These teens engage in bullying behavior towards their peers. There are many risk factors that may contribute to their involvement in the behavior. Often, these kids require support to change their behavior and address any other challenges that may be influencing their behavior.
- **Those who are Bullied**: These teens are the targets of bullying behavior. Some factors put them at more risk of being bullied, but not all kids with these characteristics will be bullied. Sometimes, these individuals may need help learning how

to respond to bullying.

Witnesses to Bullying

Even if a person is not directly involved in bullying, they may be contributing to the behavior. Witnessing the behavior may also affect the situation, so they need to learn what they should do when they see bullying happen. Roles kids play when they witness bullying include:

- **Those who Assist**: These individuals may not start the bullying or lead in the bullying behavior, but serve as an "assistant" to those who are bullying. These kids may encourage bullying behavior and occasionally join in.
- **Those who Reinforce**: These kids are not directly involved in the bullying behavior, but they give the bullying an audience. They will often laugh or provide support for those who are engaging in bullying. This may encourage the bullying to continue.
- **Outsiders**: These individuals remain separate from the bullying situation. They neither reinforce the bullying behavior nor defend the person being bullied. Some may watch what is going on but do not provide feedback about the situation to show they are on anyone's side. Even so, providing an audience may encourage bullying behavior. These witnesses may want to help but do not know-how.
- **Those who Defend**: These witnesses actively comfort the person being bullied and may come to their defense when bullying occurs.

Most participants play more than one role in bullying over time. In some cases, they may be directly involved in bullying as the one bullying others or being bullied. In others, they may witness bullying and play an assisting or defending role. Every situation is different. Some kids are both bullied and bully others. It is important to note the multiple roles kids play, because those who are both bullied and bully others may be at more risk for adverse outcomes, such as depression or suicidal ideation. Also, it highlights the need to engage all kids in prevention efforts, not just those who are known to be directly involved.

Bystanders: Become an Upstander to Bullying

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 11.4.1. Bystander discusses the roles of a bullying incident and how bystanders may be key to preventing and stopping bullying.

Who Is at Risk?

No single factor puts a child at risk of being bullied or bullying others. Bullying can happen anywhere—cities, suburbs, or rural towns. Depending on the environment, some groups—such as lesbian, gay, bisexual, transgender, or questioning (LGBTQ) youth, youth with disabilities, and socially isolated youth—may be at an increased risk of being bullied.

Those at Risk of Being Bullied

Generally, those who are bullied have one or more risk factors. Adolescents that are perceived as different from their peers, such as being overweight or underweight, wearing glasses or different clothing, being new to a school, or being unable to afford what kids consider "cool" are at risk for bullying. As are those perceived as weak or unable to defend themselves or are less popular than others and have few friends. Also, at risk for bullying are those that are depressed, anxious, or have low self-esteem. Finally, those that do not get along well with others, are seen as annoying or provoking, or antagonize others for attention are more likely to be bullied. However, even if a child has these risk factors, it does not mean that they will be bullied.

Those More Likely to Bully Others

There are two types of kids who are more likely to bully others. The first is well-connected to their peers, have social power, are overly concerned about their popularity, and like to dominate or be in charge of others. The others are more isolated from their peers and may be depressed or anxious, have low self-esteem, be less involved in school, be easily pressured by peers, or not identify with the emotions or feelings of others.

There are specific risk factors that make someone more likely to bully others. Those that are aggressive or easily frustrated, have difficulty following rules, and view violence in a positive way are more likely to bully. Also, those that think badly of others and have friends who bully are at higher risk for the same behavior. Finally, kids that have less parental involvement or are having issues at home may display more bullying behaviors.

Remember, those who bully others do not need to be stronger or bigger than those they bully. The power imbalance can come from several sources—popularity, strength, cognitive ability—and children who bully may have more than one of these characteristics.

Warning Signs of Bullying

There are many warning signs that may indicate that someone is affected by bullying—either being bullied or bullying others. Recognizing the warning signs is an essential first step in taking action against bullying. Not all children who are bullied or are bullying others ask for help.

It is important to talk with children who show signs of being bullied or bullying others. These warning signs can also point to other issues or problems, such as depression or substance abuse. Talking to the child can help identify the root of the problem.

Signs of Being Bullied

Look for changes in the child. However, be aware that not all children who are bullied exhibit warning signs. Some signs that may point to a bullying problem are unexplainable injuries or lost and destroyed clothing, books, electronics, or jewelry. Those being bullied may report frequent headaches or stomach aches, feeling sick or faking illness. They may have changes in eating habits, like suddenly skipping meals or binge eating. Kids may come home from school hungry because they did not eat lunch. They may also have difficulty sleeping or frequent nightmares.

Signs of Bullying Others

Kids may be bullying others if they get into physical or verbal fights or have friends who bully others. They may demonstrate increasing levels of aggressive behavior and get sent to the principal's office or detention frequently. They may also have unexplained extra money or new belongings.

Why Don't Kids Ask for Help?

Statistics from the 2012 Indicators of School Crime and Safety show that an adult was notified in less than half (40%) of bullying incidents. Kids do not tell adults for many reasons. Fo one, bullying can make a child feel helpless. Kids may want to handle it on their own to feel in control again. They may fear being seen as weak or a tattletale. Kids may fear backlash from the kid who bullied them. Bullying can be a humiliating experience. Kids may not want adults to know what is being said about them, whether true or false. They may also fear that adults will judge them or punish them for being weak. Kids who are bullied may already feel socially isolated. They may feel like no one cares or could understand. Finally, kids may fear being rejected by their peers. Friends can help protect kids from bullying, and kids can fear of losing this support.

Effects of Bullying

Bullying can affect everyone—those who are bullied, those who bully, and those who witness bullying. Bullying is linked to many negative outcomes, including impacts on mental health, substance use, and suicide. It is important to talk to kids to determine whether bullying—or something else—is a concern.

Kids Who Are Bullied

Kids who are bullied can experience negative physical, school, and mental health issues. Kids who are bullied are more likely to experience depression and anxiety, increased feelings of sadness and loneliness, changes in sleep and eating patterns, and loss of interest in activities they used to enjoy. These issues may persist into adulthood. They may have more health complaints. Decreased academic achievement and school participation is a common effect of being bullied. They are also more likely to miss, skip, or drop out of school. A very small number of bullied kids might retaliate through extremely violent measures. In 12 of 15 school shooting cases in the 1990s, the shooters had a history of being bullied.

Kids Who Bully Others

Kids who bully others can also engage in violent and other risky behaviors into adulthood. Kids who bully are more likely to abuse alcohol and other drugs in adolescence and as adults. They are also more likely to get into fights, vandalize property, and drop out of school. They have criminal convictions and traffic citations as adults. They may engage in early sexual activity. They are also more likely to be abusive toward their romantic partners, spouses, or children as adults.

Bystanders

Kids who witness bullying are more likely to miss or skip school. They are also more like to use tobacco, alcohol, or other drugs. Bystanders are at increased risk of developing mental health problems, including depression and anxiety.

The Relationship Between Bullying and Suicide

Media reports often link bullying with suicide. However, most youth who are bullied do not have thoughts of suicide or engage in suicidal behaviors. Although kids who are bullied are at risk of suicide, bullying alone is not the cause. Many issues contribute to suicide risk, including depression, problems at home, and trauma history. Additionally, specific groups have an increased risk of suicide, including American Indian and Alaskan Native, Asian American, lesbian, gay, bisexual, and transgender youth. This risk can be increased further when these kids are not supported by parents, peers, and schools. Bullying can make an unsupportive situation worse.

Special Concern: Cyberbullying

Cyberbullying is bullying that takes place over digital devices like cell phones, computers, and tablets. Cyberbullying can occur through SMS, Text, and apps, or online in social media, forums, or gaming where people can view, participate in, or share content. Cyberbullying includes sending, posting, or sharing negative, harmful, false, or mean content about someone else. It can include sharing personal or private information about someone else, causing embarrassment or humiliation. Some cyberbullying crosses the line into unlawful or criminal behavior.

With the prevalence of social media and digital forums, comments, photos, posts, and content shared by individuals can often be viewed by strangers, as well as acquaintances. The content an individual shares online — both their personal content as well as any negative, mean, or hurtful content — creates a kind of permanent public record of their views, activities, and behavior. This public record can be thought of as an online reputation, which may be accessible to schools, employers, colleges, clubs, and others who may be researching an individual now or in the future. Cyberbullying can harm the online reputations of everyone involved – not just the person being bullied, but those doing the bullying or participating in it. Cyberbullying has unique concerns in that it can be:

- **Persistent**: Digital devices offer the ability to immediately and continuously communicate 24 hours a day, so it can be difficult for children experiencing cyberbullying to find relief.
- **Permanent**: Most information communicated electronically is permanent and public, if not reported and removed. A negative online reputation, including for those who bully, can impact college admissions, employment, and other areas of life.
- **Hard to Notice**: Because teachers and parents may not overhear or see cyberbullying taking place, it is harder to recognize.

Cyberbullying and Online Gaming

Playing videogames is a popular activity, with 72 percent of teens gaming online. Many video games — whether they are console,

web, or computer-based — allow users to play with friends they know in person and others they have met only online. While gaming can have positive benefits like making new friends, socializing, and learning how to strategize and problem solve, it is also another place where cyberbullying occurs.

The anonymity of players and the use of avatars allow users to create alter-egos or fictional versions of themselves, which is part of the fun of gaming. However, it also allows users to harass, bully, and sometimes gang up on other players, sending or posting negative or hurtful messages and using the game as a tool of harassment. If someone is not performing well, other children may curse or make negative remarks that turn into bullying, or they might exclude the person from playing together.

Because players are anonymous, they cannot necessarily be held accountable for their behavior, and their harassment can cause some players to leave games. Some anonymous users use the game as a means to harass strangers or to get their personal information, like user names and passwords.

There are things adults can do to prevent cyberbullying of children who are gaming. Parents should play the game or observe when the gaming happens to understand how it works and what a child is exposed to in the game. Check-in periodically with children about who is online, playing the game with them. Teach children about safe online behavior, including not clicking on links from strangers, not sharing personal information, not participating in bullying behavior of other players, and what to do if they observe or experience bullying. Establish rules about how much time a child can spend playing video games.

Warning Signs of Cyberbullying

Many of the warning signs that cyberbullying is occurring happen around a child's use of their device. Some of the warning signs that a kid may be involved in cyberbullying include noticeable increases or decreases in device use. Kids may exhibit unusual emotional responses (laughter, anger, upset) to what is happening on their device. A teen hides their screen or device when others are near, and avoids discussion about what they are doing on their device. There may be sudden changes to social media accounts, with accounts being shut down or new ones appear. If a teen starts to avoid social situations, even those that were enjoyed in the past. Alternatively, if they become withdrawn or depressed, or loses interest in people and activities.

What to Do When Cyberbullying Happens

When warning signs that a child may be involved in cyberbullying, adults should take steps to investigate that kid's digital behavior. Cyberbullying is a form of bullying, and adults should take the same approach to address it: support the person being bullied, address the bullying behavior of a participant, and show all involved that cyberbullying is taken seriously. Because cyberbullying happens online, responding to it requires different approaches. If an adult thinks that cyberbullying is occurring, several things can be done. First, *recognize* if there has been a change in mood or behavior and explore what the cause might be. Try to determine if these changes happen around a child's use of their digital devices. *Ask* questions to learn what is happening, how it started, and who is involved. *Document* what is happening and where. Take screenshots of harmful posts or content, if possible. Most laws and policies note that bullying is a repeated behavior, so records help to document it. *Report* issues to social media platforms and refer to the school's reporting policies. If a child has received physical threats, or if a potential crime or illegal behavior is occurring, report it to the police. *Provide support***.** Peers, mentors, and trusted adults can sometimes intervene publicly to positively influence a situation where negative or hurtful content posts about a child. Public Intervention can include posting positive comments about the person targeted with bullying to try to shift the conversation in a positive direction. It can also help to reach out to the child who is bullying and the target of the bullying to express concern. If possible, try to determine if more professional support is needed for those involved, such as speaking with a guidance counselor or mental health professional.

Watch it

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

View this YouTube Video online

Video 11.4.2. Ways to Stop Bullying.

Candela Citations

CC licensed content, Original

- Bullying. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...pter/bullying/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Bullying. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/at...pter/bullying/. **License**: CC BY: Attribution
- Cyberbullying. **Provided by**: Lumen Learning. **Retrieved from**: https://courses.lumenlearning.com/at...cyberbullying/. **License**: CC BY: Attribution

All rights reserved content

- Ways to Stop Bullying . **Provided by**: watchwellcast. **Retrieved from**: https://youtu.be/ynTuA_tlZDE. **License**: All Rights Reserved

Public domain content

- Bystander Video. **Provided by**: U.S. Department of Health and Human Services. **Retrieved from**: https://youtu.be/StPGbbBBrI0. **Project**: StopBullying.gov. **License**: CC0: No Rights Reserved

This page titled 11.3: Bullying is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

11.4: Teen Dating

Healthy relationships in adolescence can help shape a young person's identity and prepare teens for more positive relationships during adulthood. Providing adolescents with tools to start and maintain healthy relationships (with romantic partners as well as peers, employers, teachers, and parents) may have a positive influence on young people's overall development.

The Role of Healthy Romantic and Dating Relationships

Adolescents tend to become more interested in dating around their mid-teens and become more involved in dating relationships during high school. Although dating does increase during this time, it is also normal for adolescents not to be in a relationship. Nearly two-thirds of teens (ages 13-17) have not been in a dating or romantic relationship. Thirty-five percent of teens (ages 13-17) have some experience with romantic relationships, and 19 percent are currently in a relationship. Older teens (ages 15-17) are more likely than younger teens to have experience with romantic relationships (Lenhart et al., 2015).

Adolescents date less now than they did in the past. This change is most striking for 12th-grade students, where the percentage of youth who did not date increased from 14 percent in 1991 to 38 percent in 2013. Adolescent sexual activity also has decreased from previous decades (Child Trends Databank, 2015). The percentage of U.S. high school students who had ever had sex decreased from 54 percent in 1992 to 40 percent in 2017 (Centers for Disease Control and Prevention, 2018).

Experiencing healthy dating relationships does have benefits to adolescent development. Knowing how to establish and maintain healthy romantic relationships can help adolescents grow. Healthy dating during the teenage years can be an essential way to develop social skills, learn about other people, and grow emotionally. These relationships also can play a role in supporting youth's ability to develop positive relationships in other areas, including: in school, with employers, and with partners during adulthood.

Both male and female youth value intimacy, closeness, and emotional investment in romantic relationships. These relationships can be accompanied by extreme excitement and happiness, but also by disappointment and sadness. However, some youth might go beyond the normal range of emotions and may experience depression.

While meeting partners online has been growing in popularity and is becoming more common among adults, few teens meet their romantic partners online. In 2015, only 8 percent of all teenagers had met a romantic partner online. Of course, many teens have never dated anyone, but among those with dating experience, 24 percent dated or hooked up with someone they first met online. Among this 24 percent, half of the teens had met just one romantic partner online, while the other half had met more than one partner online (Lenhart et al., 2015).

Teen Dating Violence

Healthy relationships consist of trust, honesty, respect, equality, and compromise. Unfortunately, teen dating violence—the type of intimate partner violence that occurs between two young people who are, or who were once in, an intimate relationship—is a serious problem in the United States. Teen dating violence can take place in person or electronically, such as repeated texting or posting sexual pictures of a partner online without consent. Unhealthy relationships can start early and last a lifetime. Teens often think some behaviors, like teasing and name-calling, are a "normal" part of a relationship—but these behaviors can become abusive and develop into serious forms of violence. However, many teens do not report unhealthy behaviors because they are afraid to tell family and friends.

A national survey found that ten percent of teens, 1 in 11 females and 1 in 15 males, had been the victims of physical dating violence within the past year. Approximately 29 percent of adolescents reported being verbally or psychologically abused within the previous year. About 1 in 9 female and 1 in 36 male high school students report having experienced sexual dating violence in the last year. The burden of teen dating violence is not shared equally across all groups—sexual minority groups are disproportionately affected by all forms of violence, and some racial/ethnic minority groups are disproportionately affected by many types of violence.

As for perpetration rates, there are currently no nationwide estimates for who does the abusing, and state estimates vary significantly. In South Carolina, for example, nearly 8 percent of adolescents reported being physically violent to a romantic partner. Interestingly, the rates of reported victimization versus perpetration in the state were similar for boys and girls. However,

when it comes to severe teen dating violence — including sexual and physical assault — girls were disproportionately the victims

Research on teen dating violence has found that girls and boys perpetrate the same frequency of physical aggression in romantic relationships. This finding was at odds with common perceptions and the experience of practitioners that work with these youth. Practitioners overwhelmingly report encountering female victims and hear that males are the primary perpetrators.

Teen Dating Violence Requires a Different Framework

Because teen dating violence has only recently been recognized as a significant public health problem, the complex nature of this phenomenon is not fully understood. Although research on rates of perpetration and victimization exists, research that examines the problem from a longitudinal perspective and considers the dynamics of teen romantic relationships is lacking. Consequently, those in the field have to rely on an adult framework to examine the problem of teen dating violence.

However, we find that this adult framework does not take into account key differences between adolescent and adult romantic relationships. Thus, to help further the discussion, we offer in this article a gender-based analysis of teen dating violence with a developmental perspective. We look at what we know — and what we do not know — about who is the perpetrator and who is the victim in teen dating violence. We also discuss how adult and adolescent romantic relationships differ in the hope that an examination of existing research will help us better understand the problem and move the field toward the creation of developmentally appropriate prevention programs and effective interventions for teenagers.

Victims and Perpetrators: What the Research Says

In 2001-2005, Peggy Giordano and her colleagues at Bowling Green State University interviewed more than 1,300 seventh, ninth and 11th graders in Toledo, Ohio. More than half of the girls in physically aggressive relationships said both they and their dating partner committed aggressive acts during the relationship. About a third of the girls said they were the sole perpetrators, and 13 percent reported that they were the sole victims. Almost half of the boys in physically aggressive relationships reported mutual aggression, nearly half reported they were the sole victim, and 6 percent reported that they were the sole perpetrator.

These findings are generally consistent with another study that looked at more than 1,200 Long Island, N.Y., high school students who were currently dating. In that 2007 survey, 66 percent of boys and 65 percent of girls who were involved in physically aggressive relationships reported mutual aggression (O'Leary et al., 2008). Twenty-eight percent of the girls said that they were the sole perpetrator; 5 percent said they were the sole victim. These numbers were reversed for the boys: 5 percent said they were the sole perpetrator, 27 percent the sole victim.

In a third study, teen couples were videotaped while performing a problem-solving task. Researchers later reviewed the tapes and identified acts of physical aggression that occurred between the boys and girls during the exercise. They found that 30 percent of all the participating couples demonstrated physical aggression by both partners. In 17 percent of the participating couples, only the girls perpetrated physical aggression, and in 4 percent, only the boys were perpetrators (Capaldi et al., 2007). The findings suggest that boys are less likely to be physically aggressive with a girl when someone else can observe their behavior.

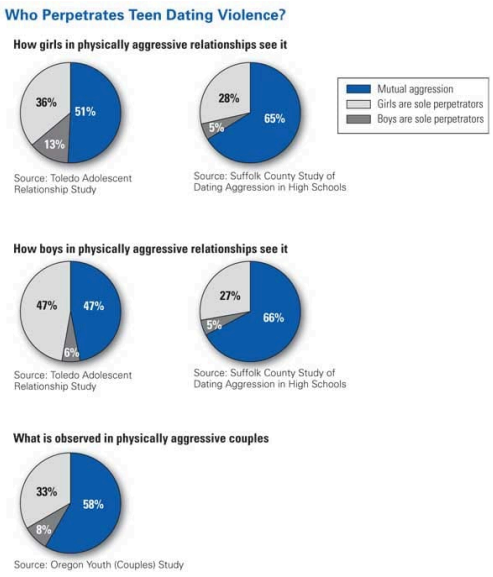


Figure 11.5.1. Statistics on the perpetration of physical teen violence by gender.

Considered together, the findings from these three studies reveal that frequently there is mutual physical aggression by girls and boys in romantic relationships. However, when it comes to *motivations* for using violence, and the consequences of being a victim of teen dating violence, the differences between the sexes are pronounced. Although both boys and girls report that anger is the primary motivating factor for using violence, girls also commonly report self-defense as a motivating factor, and boys also commonly cite the need to exert control. Boys are also more likely to react with laughter when their partner is physically aggressive. Girls experiencing teen dating violence are more likely than boys to suffer long-term negative behavioral and health consequences, including suicide attempts, depression, cigarette smoking, and marijuana use.

Applying Adult Perspectives to Teen Dating Violence

Why do teenagers commit violence against each other in romantic relationships? We have already touched on the existing body of research on perpetration and victimization rates. Nevertheless, there is not a great deal of research that uses a longitudinal perspective or that considers the dynamics of teen romantic relationships. As a result, practitioners and researchers in the field tend to apply an adult intimate partner violence framework when examining the problem of teen dating violence.

A split currently exists, however, among experts in the adult intimate partner violence arena. Some experts hold that men and women are mutually combative and that this behavior should be seen as part of a larger pattern of family conflict. Supporters of this view generally cite studies that use “act” scales, which measure the number of times a person perpetrates or experiences certain acts, such as pushing, slapping, or hitting. These studies tend to show that women report perpetrating slightly more physical violence than men. It is interesting to note that most studies on teen dating violence that have been conducted to date have relied primarily on “act” scales.

Another group of experts holds that men generally perpetrate serious intimate partner violence against women. They contend that men in patriarchal societies use violence to exert and maintain power and control over women. These experts also maintain that “act” scales do not accurately reflect the nature of violence in intimate relationships because they do not consider the degree of injury inflicted, coercive and controlling behaviors, the fear induced, or the context in which the acts occurred. Studies using “act” scales, they contend, lack information on power and control and emphasize the more common and relatively minor forms of aggression rather than more severe, relatively rare forms of violence in dating and intimate partner relationships. Instead, supporters of this perspective use data on injuries and in-depth interviews with victims and perpetrators.

We believe, however, that applying either of these adult perspectives to adolescents is problematic. Although both views of adult intimate partner violence can help inform our understanding of teen dating violence, it is important to consider how adolescent romantic relationships differ from adult romantic relationships in several key areas.

How Teen Dating Violence Differs: Equal Power

One difference between adolescent and adult relationships is the absence of elements traditionally associated with greater male power in adult relationships. Adolescent girls are not typically dependent on romantic partners for financial stability, and they are less likely to have children to provide for and protect.

The study of seventh, ninth and 11th graders in Toledo (Giordano, 2007), for example, found that a majority of the boys and girls who were interviewed said they had a relatively "equal say" in their romantic relationships. In cases in which there was a power imbalance, they were more likely to say that the female had more power in the relationship. Overall, the study found that the boys perceived that they had less power in the relationship than the girls did. Interestingly, males involved in relationships in which one or both partners reported physical aggression had a perception of less power than males in relationships without physical aggression. Meanwhile, the girls reported no perceived difference in power regardless of whether their relationships included physical aggression.

It is interesting to note that adults who perpetrate violence against family members often see themselves as powerless in their relationships. This dynamic has yet to be adequately explored among teen dating partners.

Lack of Relationship Experience

A second key factor that distinguishes violence in adult relationships from violence in adolescent relationships is the lack of experience teens have in negotiating romantic relationships. Inexperience in communicating and relating to a romantic partner may lead to the use of poor coping strategies, including verbal and physical aggression. A teen who has difficulty expressing himself or herself may turn to aggressive behaviors (sometimes in play) to show affection, frustration, or jealousy. A recent study in which boys and girls participated in focus groups on dating found that physical aggression sometimes stemmed from an inability to communicate feelings and a lack of constructive ways to deal with frustration.

As adolescents develop into young adults, they become more realistic and less idealistic about romantic relationships. They have a greater capacity for closeness and intimacy. Holding idealistic beliefs about romantic relationships can lead to disillusionment and ineffective coping mechanisms when conflict emerges. It also seems reasonable to expect that physical aggression may be more common when adolescents have not fully developed their capacity for intimacy, including their ability to communicate.

The Influence of Peers

We would be remiss to try to understand teen behavior and not consider the profound influence of friends. Peers exert more influence on each other during their adolescent years than at any other time. Research has confirmed that peer attitudes and behaviors are critical influences on teens' attitudes and behaviors related to dating violence.

Not only are friends more influential in adolescence than in adulthood, but they are also more likely to be "on the scene" and a key element in a couple's social life. In fact, roughly half of adolescent dating violence occurs when a third party is present. Relationship dynamics often play out in a very public way because teens spend a large portion of their time in school and in groups. For various reasons, a boyfriend or girlfriend may act very differently when in the presence of peers, a behavior viewed by adolescents as characteristic of an unhealthy relationship. For example, boys in one focus group study said that if a girl hit them in front of their friends, they would need to hit her back to "save face."

Conflict over how much time is spent with each other versus with friends, jealousies stemming from too much time spent with a friend of the opposite sex, and new romantic possibilities are all part of the social fabric of adolescence. Although "normal" from a developmental perspective, navigating such issues can cause conflict and, for some adolescents, lead to aggressive responses and problematic coping strategies, such as stalking, psychological or verbal abuse, and efforts to gain control.

Risk Factors for Teen Dating Violence Victimization

Findings suggest that the frequency and severity of teen dating violence increase with age. In addition, the likelihood of being subjected to violence in a relationship increases for teens who:

- Experience stressful life events or show symptoms of trauma (including a history of sexual abuse or prior sexual victimization).
- Live in poverty, come from disadvantaged homes, or receive child protective services.

- Are exposed to community or neighborhood violence.
- Participate in risky behaviors (e.g., substance abuse, alcohol use, violence).
- Begin dating at an early age.
- Participate in sexual activity before age 16.
- Have problem behaviors in other areas.
- Have a friend involved in dating violence.
- Participate in peer violence or have violent friends.
- Believe that dating violence is acceptable or is more accepting of rape myths and violence against women.
- Begin menstruating at an early age (for women).
- Have been exposed to harsh parenting, inconsistent discipline, or lack supervision, monitoring, and warmth.
- Have low self-esteem, anger, or depressed mood.
- Use emotional disengagement and confrontational blaming as coping mechanisms.
- Exhibit maladaptive or antisocial behaviors.
- Have aggressive conflict-management styles.
- Have low help-seeking proclivities.

Risk Factors for Teen Dating Violence Perpetration

In addition to the issues discussed above, there are additional factors that are associated with teen dating violence perpetration include:

- Believing that it is acceptable to use threats or violence to get one's way or to express frustration or anger.
- Problems managing anger or frustration.
- Association with violent peers.
- Low self-esteem and depression.
- Not having parental supervision and support.
- Witnessing violence at home or in the community.

Impacts of Teen Dating Violence

Unhealthy, abusive, or violent relationships can have severe consequences and short-and long-term adverse effects on a developing teen. For example, youth who are victims of teen dating violence are more likely to experience symptoms of depression and anxiety, engage in unhealthy behaviors, like using tobacco, drugs, and alcohol, exhibit antisocial behaviors, like lying, theft, bullying, or hitting, and think about suicide.

Violence in an adolescent relationship sets the stage for problems in future relationships, including intimate partner violence and sexual violence perpetration and/or victimization throughout life. For example, youth who are victims of dating violence in high school are at higher risk for victimization during college.

In the case of sexual teen dating violence, it can negatively influence the development of healthy sexuality, intimacy, and identity as youth grow into adulthood. These experiences can increase the risk of physical injury, poor academic performance, binge drinking, suicide attempts, unhealthy sexual behaviors, substance abuse, negative body image and self-esteem, and violence in future relationships.

Teen dating violence can be prevented. Prevention is most successful when there is a focus on reducing risk factors as well as fostering protective factors. Teens should also be empowered through family, friends, and others (including role models such as teachers, coaches, mentors, and youth group leaders) to lead healthy lives and establish healthy relationships. It is crucial to create spaces, such as school communities, where the behavioral norms are not tolerant of abuse in dating relationships. The message must be clear that treating people in abusive ways will not be accepted, and policies must enforce this message to keep students safe.

Prevention Programs

The ultimate goal of education about youth violence is to stop teen dating violence before it begins. During the preteen and teen years, young people are learning the skills they need to form positive, healthy relationships with others. Therefore, it is an ideal time to promote healthy relationships and prevent patterns of teen dating violence that can last into adulthood.

In addition to teaching relationship skills, prevention programs can focus on promoting protective factors—that is, characteristics of a teen's environment that can support healthy development—and positive youth development. These can also be fostered by a teen's home and community. For example, higher levels of bonding to parents and enhanced social skills can protect girls against victimization. Similarly, for boys, high levels of parental bonding are associated with less externalizing behavior, which in turn is associated with less teen dating violence victimization.

Most of the handful of programs that have been empirically investigated are school-based and use a group format. Program length varies from less than a day to more than 20 sessions. A few programs frame the issue using a feminist perspective, while others use a more skills-based and gender-neutral approach. Teen dating violence prevention programs tend to focus on attitudes about violence, gender stereotyping, conflict management, and problem-solving skills. Activities aimed at increasing awareness and dispelling myths about violence in relationships are often included in the curriculum.

Candela Citations

CC licensed content, Original

- Dating. **Authored by**: Nicole Arduini-Van Hoose. **Provided by**: Hudson Valley Community College. **Retrieved from**: https://courses.lumenlearning.com/ad...hapter/dating/. **License**: CC BY-NC-SA: Attribution-NonCommercial-ShareAlike

CC licensed content, Shared previously

- Preventing Teen Violence. **Provided by**: Centers for Disease Control and Prevention. **Retrieved from**: https://www.cdc.gov/violencepreventi.../fastfact.html. **License**: CC0: No Rights Reserved
- Healthy Dating Relationships in Adolescence. **Provided by**: U.S. Department of Health and Human Services. **Retrieved from**: https://www.hhs.gov/ash/oah/adolesce...ing/index.html. **License**: CC0: No Rights Reserved
- Other Types of Aggressive Behavior, Dating Violence, and Prevention Programs. **Retrieved from**: https://courses.lumenlearning.com/at...tion-programs/. **License**: CC BY: Attribution
- Teen Dating Violence: A closer Look at Adolescent Romantic Relationships. **Authored by**: Carrie Mulford and Peggy C. Giordano. **Provided by**: National Institute of Justice. **Retrieved from**: https://nij.ojp.gov/topics/articles/...ps#citation--1. **License**: CC0: No Rights Reserved

This page titled 11.4: Teen Dating is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

clique: used to describe a group of persons who interact with each other more regularly and intensely than others in the same setting. Cliques are distinguished from “crowds” in that their members interact with one another

crowds: large groups of adolescents defined by their shared image and reputation

homophily: a tendency of individuals to form links disproportionately with others like themselves

deviant peer contagion: the process by which peers reinforce problem behavior by laughing or showing other signs of approval that then increase the likelihood of future problem behavior

peer pressure: encouragement to conform to one’s friends or contemporaries in behavior, dress, and attitude; usually considered a negative force, as when adolescent peers encourage one another to defy adult authority

This page titled 11.5: Glossary is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

INDEX

No index terms found.

This page titled Index is shared under a license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

GLOSSARY

S

Sample Word 1 | Sample Definition 1

This page titled Glossary is shared under a license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

DETAILED LICENSING

Overview

Title: Adolescent Psychology (Arduini-VanHoose)

Webpages: 89

Applicable Restrictions: Noncommercial

All licenses found:

- CC BY-NC-SA 4.0: 88.8% (79 pages)
- Undeclared: 10.1% (9 pages)
- Other: 1.1% (1 page)

By Page

- Adolescent Psychology (Arduini-VanHoose) - *CC BY-NC-SA 4.0*
  - Front Matter - *Undeclared*
    - TitlePage - *Undeclared*
    - InfoPage - *Other*
    - Table of Contents - *Undeclared*
    - Licensing - *Undeclared*
  - 1: Studying Adolescent Psychology - *CC BY-NC-SA 4.0*
    - 1.1: Human Development - *CC BY-NC-SA 4.0*
    - 1.2: Key Issues in Human Development - *CC BY-NC-SA 4.0*
    - 1.3: The Forbidden Experiment - *CC BY-NC-SA 4.0*
    - 1.4: The Lifespan Perspective - *CC BY-NC-SA 4.0*
    - 1.5: Glossary - *CC BY-NC-SA 4.0*
  - 2: Psychological Research - *CC BY-NC-SA 4.0*
    - 2.1: The Scientific Method - *CC BY-NC-SA 4.0*
    - 2.2: Quantitative and Qualitative Approaches to Research - *CC BY-NC-SA 4.0*
    - 2.3: Descriptive Research - *CC BY-NC-SA 4.0*
    - 2.4: Methods of Data Collection - *CC BY-NC-SA 4.0*
    - 2.5: Analyzing Data- Correlational and Experimental Research - *CC BY-NC-SA 4.0*
    - 2.6: Correlational Research - *CC BY-NC-SA 4.0*
    - 2.7: Experimental Research - *CC BY-NC-SA 4.0*
    - 2.8: Developmental Research Designs - *CC BY-NC-SA 4.0*
    - 2.9: Challenges in Conducting Developmental Research - *CC BY-NC-SA 4.0*
    - 2.10: Glossary - *CC BY-NC-SA 4.0*
  - 3: Psychological Approaches - *CC BY-NC-SA 4.0*
    - 3.1: Understanding Theories - *CC BY-NC-SA 4.0*
    - 3.2: History of Developmental Psychology - *CC BY-NC-SA 4.0*
    - 3.3: Contemporary Psychological Approaches - *CC BY-NC-SA 4.0*
    - 3.4: Psychodynamic Approach - *CC BY-NC-SA 4.0*
    - 3.5: Behavioral Approach - *CC BY-NC-SA 4.0*
    - 3.6: Humanistic Approach - *CC BY-NC-SA 4.0*
    - 3.7: Cognitive Approach - *CC BY-NC-SA 4.0*
    - 3.8: Contextual Approach - *CC BY-NC-SA 4.0*
    - 3.9: Biopsychology and Evolutionary Psychology - *CC BY-NC-SA 4.0*
    - 3.10: Comparing Contemporary Approaches - *CC BY-NC-SA 4.0*
    - 3.11: Glossary - *CC BY-NC-SA 4.0*
  - 4: Physical Development during Adolescence - *CC BY-NC-SA 4.0*
    - 4.1: Puberty Begins - *CC BY-NC-SA 4.0*
    - 4.2: Sexual Development - *CC BY-NC-SA 4.0*
    - 4.3: Health Concerns during Adolescence - *CC BY-NC-SA 4.0*
    - 4.4: Glossary - *CC BY-NC-SA 4.0*
  - 5: Brain Development during Adolescence - *CC BY-NC-SA 4.0*
    - 5.1: Brain Basics - *CC BY-NC-SA 4.0*
    - 5.2: Brain Changes during Adolescence - *CC BY-NC-SA 4.0*
    - 5.3: Adolescent Sleep - *CC BY-NC-SA 4.0*
    - 5.4: Teens and Risk-Taking Behavior - *CC BY-NC-SA 4.0*
    - 5.5: Inside the Teenage Brain - *CC BY-NC-SA 4.0*
    - 5.6: Behavioral and Psychological Adjustment - *CC BY-NC-SA 4.0*
    - 5.7: Glossary - *CC BY-NC-SA 4.0*
  - 6: Cognitive Changes during Adolescence - *CC BY-NC-SA 4.0*
    - 6.1: Constructivist Theories - *CC BY-NC-SA 4.0*
    - 6.2: Psychological Constructivism - *CC BY-NC-*

SA 4.0
- 6.3: Social Constructivism - CC BY-NC-SA 4.0
- 6.4: Information Processing Theories - CC BY-NC-SA 4.0
- 6.5: Intelligence - CC BY-NC-SA 4.0
- 6.6: Glossary - CC BY-NC-SA 4.0

- 7: Learning, Achievement, and Work in Adolescence - CC BY-NC-SA 4.0
  - 7.1: Education - CC BY-NC-SA 4.0
  - 7.2: Understanding Learning Difficulties - CC BY-NC-SA 4.0
  - 7.3: Academic Achievement - CC BY-NC-SA 4.0
  - 7.4: Work and Career - CC BY-NC-SA 4.0
  - 7.5: Glossary - CC BY-NC-SA 4.0
- 8: Identity Development - CC BY-NC-SA 4.0
  - 8.1: Identity Formation - CC BY-NC-SA 4.0
  - 8.2: Identity Development Theory - CC BY-NC-SA 4.0
  - 8.3: Domains of Identity - CC BY-NC-SA 4.0
  - 8.4: Glossary - CC BY-NC-SA 4.0
- 9: Moral Development - CC BY-NC-SA 4.0
  - 9.1: Theories of Moral Development - CC BY-NC-SA 4.0
  - 9.2: Modern Views of Moral Development - CC BY-NC-SA 4.0
  - 9.3: Influences on Moral Development - CC BY-NC-SA 4.0
  - 9.4: Moral Reasoning in Adolescence - CC BY-NC-SA 4.0
  - 9.5: Glossary - CC BY-NC-SA 4.0
- 10: Changing Family Relationships - CC BY-NC-SA 4.0
  - 10.1: Key Components of Good Parenting - CC BY-NC-SA 4.0
  - 10.2: Family Life - CC BY-NC-SA 4.0
  - 10.3: Child Maltreatment - CC BY-NC-SA 4.0
  - 10.4: Stress and Development - CC BY-NC-SA 4.0
  - 10.5: Glossary - CC BY-NC-SA 4.0
- 11: Changing Peer Relationships - CC BY-NC-SA 4.0
  - 11.1: Peer Relationships - CC BY-NC-SA 4.0
  - 11.2: Sociometric Peer Status - CC BY-NC-SA 4.0
  - 11.3: Bullying - CC BY-NC-SA 4.0
  - 11.4: Teen Dating - CC BY-NC-SA 4.0
  - 11.5: Glossary - CC BY-NC-SA 4.0
- Back Matter - Undeclared
  - Index - Undeclared
  - Glossary - Undeclared
  - Detailed Licensing - Undeclared
  - Detailed Licensing - Undeclared

This page titled Adolescent Psychology (Arduini-VanHoose) is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.

DETAILED LICENSING

Overview

Title: Adolescent Psychology (Arduini-VanHoose)

Webpages: 89

Applicable Restrictions: Noncommercial

All licenses found:

- CC BY-NC-SA 4.0: 88.8% (79 pages)
- Undeclared: 10.1% (9 pages)
- Other: 1.1% (1 page)

By Page

- Adolescent Psychology (Arduini-VanHoose) - *CC BY-NC-SA 4.0*
  - Front Matter - *Undeclared*
    - TitlePage - *Undeclared*
    - InfoPage - *Other*
    - Table of Contents - *Undeclared*
    - Licensing - *Undeclared*
  - 1: Studying Adolescent Psychology - *CC BY-NC-SA 4.0*
    - 1.1: Human Development - *CC BY-NC-SA 4.0*
    - 1.2: Key Issues in Human Development - *CC BY-NC-SA 4.0*
    - 1.3: The Forbidden Experiment - *CC BY-NC-SA 4.0*
    - 1.4: The Lifespan Perspective - *CC BY-NC-SA 4.0*
    - 1.5: Glossary - *CC BY-NC-SA 4.0*
  - 2: Psychological Research - *CC BY-NC-SA 4.0*
    - 2.1: The Scientific Method - *CC BY-NC-SA 4.0*
    - 2.2: Quantitative and Qualitative Approaches to Research - *CC BY-NC-SA 4.0*
    - 2.3: Descriptive Research - *CC BY-NC-SA 4.0*
    - 2.4: Methods of Data Collection - *CC BY-NC-SA 4.0*
    - 2.5: Analyzing Data- Correlational and Experimental Research - *CC BY-NC-SA 4.0*
    - 2.6: Correlational Research - *CC BY-NC-SA 4.0*
    - 2.7: Experimental Research - *CC BY-NC-SA 4.0*
    - 2.8: Developmental Research Designs - *CC BY-NC-SA 4.0*
    - 2.9: Challenges in Conducting Developmental Research - *CC BY-NC-SA 4.0*
    - 2.10: Glossary - *CC BY-NC-SA 4.0*
  - 3: Psychological Approaches - *CC BY-NC-SA 4.0*
    - 3.1: Understanding Theories - *CC BY-NC-SA 4.0*
    - 3.2: History of Developmental Psychology - *CC BY-NC-SA 4.0*
    - 3.3: Contemporary Psychological Approaches - *CC BY-NC-SA 4.0*
    - 3.4: Psychodynamic Approach - *CC BY-NC-SA 4.0*
    - 3.5: Behavioral Approach - *CC BY-NC-SA 4.0*
    - 3.6: Humanistic Approach - *CC BY-NC-SA 4.0*
    - 3.7: Cognitive Approach - *CC BY-NC-SA 4.0*
    - 3.8: Contextual Approach - *CC BY-NC-SA 4.0*
    - 3.9: Biopsychology and Evolutionary Psychology - *CC BY-NC-SA 4.0*
    - 3.10: Comparing Contemporary Approaches - *CC BY-NC-SA 4.0*
    - 3.11: Glossary - *CC BY-NC-SA 4.0*
  - 4: Physical Development during Adolescence - *CC BY-NC-SA 4.0*
    - 4.1: Puberty Begins - *CC BY-NC-SA 4.0*
    - 4.2: Sexual Development - *CC BY-NC-SA 4.0*
    - 4.3: Health Concerns during Adolescence - *CC BY-NC-SA 4.0*
    - 4.4: Glossary - *CC BY-NC-SA 4.0*
  - 5: Brain Development during Adolescence - *CC BY-NC-SA 4.0*
    - 5.1: Brain Basics - *CC BY-NC-SA 4.0*
    - 5.2: Brain Changes during Adolescence - *CC BY-NC-SA 4.0*
    - 5.3: Adolescent Sleep - *CC BY-NC-SA 4.0*
    - 5.4: Teens and Risk-Taking Behavior - *CC BY-NC-SA 4.0*
    - 5.5: Inside the Teenage Brain - *CC BY-NC-SA 4.0*
    - 5.6: Behavioral and Psychological Adjustment - *CC BY-NC-SA 4.0*
    - 5.7: Glossary - *CC BY-NC-SA 4.0*
  - 6: Cognitive Changes during Adolescence - *CC BY-NC-SA 4.0*
    - 6.1: Constructivist Theories - *CC BY-NC-SA 4.0*
    - 6.2: Psychological Constructivism - *CC BY-NC-*

SA 4.0
- 6.3: Social Constructivism - *CC BY-NC-SA 4.0*
- 6.4: Information Processing Theories - *CC BY-NC-SA 4.0*
- 6.5: Intelligence - *CC BY-NC-SA 4.0*
- 6.6: Glossary - *CC BY-NC-SA 4.0*

◦ 7: Learning, Achievement, and Work in Adolescence - *CC BY-NC-SA 4.0*
- 7.1: Education - *CC BY-NC-SA 4.0*
- 7.2: Understanding Learning Difficulties - *CC BY-NC-SA 4.0*
- 7.3: Academic Achievement - *CC BY-NC-SA 4.0*
- 7.4: Work and Career - *CC BY-NC-SA 4.0*
- 7.5: Glossary - *CC BY-NC-SA 4.0*

◦ 8: Identity Development - *CC BY-NC-SA 4.0*
- 8.1: Identity Formation - *CC BY-NC-SA 4.0*
- 8.2: Identity Development Theory - *CC BY-NC-SA 4.0*
- 8.3: Domains of Identity - *CC BY-NC-SA 4.0*
- 8.4: Glossary - *CC BY-NC-SA 4.0*

◦ 9: Moral Development - *CC BY-NC-SA 4.0*
- 9.1: Theories of Moral Development - *CC BY-NC-SA 4.0*
- 9.2: Modern Views of Moral Development - *CC BY-NC-SA 4.0*
- 9.3: Influences on Moral Development - *CC BY-NC-SA 4.0*
- 9.4: Moral Reasoning in Adolescence - *CC BY-NC-SA 4.0*
- 9.5: Glossary - *CC BY-NC-SA 4.0*

◦ 10: Changing Family Relationships - *CC BY-NC-SA 4.0*
- 10.1: Key Components of Good Parenting - *CC BY-NC-SA 4.0*
- 10.2: Family Life - *CC BY-NC-SA 4.0*
- 10.3: Child Maltreatment - *CC BY-NC-SA 4.0*
- 10.4: Stress and Development - *CC BY-NC-SA 4.0*
- 10.5: Glossary - *CC BY-NC-SA 4.0*

◦ 11: Changing Peer Relationships - *CC BY-NC-SA 4.0*
- 11.1: Peer Relationships - *CC BY-NC-SA 4.0*
- 11.2: Sociometric Peer Status - *CC BY-NC-SA 4.0*
- 11.3: Bullying - *CC BY-NC-SA 4.0*
- 11.4: Teen Dating - *CC BY-NC-SA 4.0*
- 11.5: Glossary - *CC BY-NC-SA 4.0*

◦ Back Matter - *Undeclared*
- Index - *Undeclared*
- Glossary - *Undeclared*
- Detailed Licensing - *Undeclared*
- Detailed Licensing - *Undeclared*

This page titled Adolescent Psychology (Arduini-VanHoose) is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Nicole Arduini-Van Hoose.