PSYCHOLOGY OF GENDER



Jeanne Taylor
Citrus College



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This text was compiled on 10/08/2026

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1: SETTING THE STAGE

1.1: Module 1- Foundations of A Psychology of Gender
1.2: Module 2 – Studying Gender Using the Scientific Method

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1.1: Module 1- Foundations of A Psychology of Gender

Module 1: Foundations of A Psychology of Gender

Module Overview

In our first module, we will lay the foundation for the rest of the book by contrasting gender with the concepts of sex and sexual orientation and differentiate health and wellness. We will discuss dimensions of gender and why gender congruence is important, and then move to a listing of terms important to the study of gender. With this done, we will briefly overview movements specific to women (i.e. feminism) and men and then outline some of the professional societies and journals committed to studying gender issues.

Module Outline

- 1.1.Defining Terms
- 1.2.Movements Linked to Gender
- 1.3.Connecting with Other Psychologists of Gender

Module Learning Outcomes

- Contrast gender with sex and sexual orientation and describe the key components of gender.
- Describe movements geared to women and men.
- Identify professional societies and journals committed to the study of gender issues.

1.1. Defining Terms

Section Learning Objectives

- Define psychology.
- Contrast health and wellness.
- Differentiate sex and gender.
- List the dimensions of gender.
- Clarify the importance of gender congruence.
- Differentiate gender and sexual orientation.
- Define key terms in relation to the language of gender.

1.1.1. What is Psychology?

Welcome to your course on the psychology of gender which this book supports. Of course, you may be expecting a definition of gender in this module and we will definitely provide one. But since some students taking this class are not psychology majors or minors, and most of you had your introductory class some time ago, we want to ensure you have a solid foundation to build on. So to get us started we need to understand what psychology is.



Psychology is the scientific study of behavior and mental processes. Yes, that is correct. Psychology is s*cientific*. Psychology utilizes the same scientific process and methods practiced by disciplines such as biology and chemistry. We will discuss this in more detail in Module 2 so please just keep this in the back of your mind for now. Second, it is the study of behavior and mental processes. Psychology desires to not only understand why people engage in the behavior that they do, but also how. What is going on in the brain to control the movement of our arms and legs when running downfield to catch the game winning touchdown, what affects the words we choose to say when madly in love, how do we interpret an event as benign or a threat when a loud sound is heard, and what makes an individual view another group in less than favorable terms? Such prejudicial or discriminatory behavior could be directed at a person due to their gender or sexual orientation. These are just a few of the questions that we ask as psychologists and our focus in this book is on the *psychology* of gender.

1.1.2. What is Health and Wellness?

As we discuss the psychology of gender, we will cover numerous topics that affect a person's health and wellness. So, it seems logical that we should explain what these terms mean. The Substance Abuse and Mental Health Services Administration (SAMHSA) defines wellness as "being in good physical and mental health." They add, "Remember that wellness is not the absence of illness or stress. You can still strive for wellness even if you are experiencing these challenges in your life." Most people see wellness as just focused on the physical or mental. These are part of the picture, but definitely not the whole picture.



SAMHSA proposes eight dimensions of wellness as follows (this information is directly from their website):

- **Physical** – Recognizing the need for physical activity, healthy foods, and sleep.
- **Emotional** – Coping effectively with life and creating satisfying relationships.
- **Environmental**—Good health by occupying pleasant, stimulating environments that support well-being
- **Financial**—Satisfaction with current and future financial situations
- **Intellectual**—Recognizing creative abilities and finding ways to expand knowledge and skills
- **Occupational**—Personal satisfaction and enrichment from one's work
- **Social**— Developing a sense of connection, belonging, and a well-developed support system
- **Spiritual**— Expanding a sense of purpose and meaning in life

As we tackle the content of the remaining modules consider the various dimensions of wellness that are affected by topics related to gender such as stereotypes, identity formation, aggression, relationships, health, sexuality, development, mental disorders, and physiology. As you will see, all eight are involved at different times.

Source: https://youtu.be/tDzQdRvLAfM?si=wTpMcUAZDM3NtmI9 (opens in new window)

1.1.3. What is a Psychology of Gender?

Alright. Now to the business at hand – defining what gender is. Before we can do that we have to understand what the term sex means. But why? Aren't they the same thing. Though typically considered synonyms by many, sex and gender have distinct meanings that become important when collecting data and engaging in research. First, **sex** refers to the biological aspects of a person due to their anatomy. This includes the individual's hormones, chromosomes, body parts such as the sexual organs, and how they all interact. When we say sex, we are generally describing whether the person is male or female and this is assigned at birth.

In contrast, **gender** is socially constructed (presumed after a sex is assigned) and leads to labels such as masculinity or femininity and their related behaviors. People may declare themselves to be a man or woman, as having no gender, or falling on a continuum somewhere between man and woman. How so? According to genderspectrum.org, gender results from the complex interrelationship of three dimensions – body, identity, and social.

First, *body*, concerns our physical body, how we experience it, how society genders bodies, and the way in which others interact with us based on our body. The website states, "Bodies themselves are also gendered in the context of cultural expectations. Masculinity and femininity are equated with certain physical attributes, labeling us as more or less a man/woman based on the degree to which those attributes are present. This gendering of our bodies affects how we feel about ourselves and how others perceive and interact with us."

Next is **gender identity** or our internal perception and expression of who we are as a person. It includes naming our gender, though this gender category may not match the sex we are assigned at birth. Gender identities can take on several forms from the traditional *binary* man-woman, to *non-binary* such as genderqueer or genderfluid, and *ungendered* or agender (i.e. genderless). Though gaining an understanding of what gender we are occurs by age four, naming it is complex and can evolve over time. As genderspectrum.org says, "Because we are provided with limited language for gender, it may take a person quite some time to discover, or create, the language that best communicates their internal experience. Likewise, as language evolves, a person's name for their gender may also evolve. This does not mean their gender has changed, but rather that the words for it are shifting."

Finally, we have a *social* gender or the manner in which we present our gender in the world, but also how other people, society, and culture affect our concept of gender. In terms of the former, we communicate our gender through our clothes, hairstyles, and behavior called **gender expression**. In terms of the latter, children are socialized as to what gender means from the day they are born and through toys, colors, and clothes. Who does this socialization? Anyone outside the child can to include parents, grandparents, siblings, teachers, the media, religious figures, friends, and the community. Generally, the binary male-female view of gender is communicated for which there are specific gender expectations and roles. According to genderspectrum.org, "Kids who don't express themselves along binary gender lines are often rendered invisible or steered into a more binary gender presentation. Pressures to conform at home, mistreatment by peers in school, and condemnation by the broader society are just some of the struggles facing a child whose expression does not fall in line with the binary gender system." The good news is that gender norms do change over time such as our culture's acceptance of men wearing earrings and women getting tattoos.

1.1.4. Gender Congruence

When we feel a sense of harmony in our gender, we are said to have **gender congruence**. It takes the form of naming our gender such that it matches our internal sense of who we are, expressing ourselves through our clothing and activities, and being seen

consistently by other people as we see ourselves. Congruence does not happen overnight but occurs throughout life as we explore, grow, and gain insight into ourselves. It is a simple process for some and complex for others, though all of us have a fundamental need to obtain gender congruence.

When a person moves from the traditional binary view of gender to transgender, agender, or non-binary, they are said to "**transition**" and find congruence in their gender. Genderspectrum.org adds, "What people see as a "Transition" is actually an alignment in one or more dimensions of the individual's gender as they seek congruence across those dimensions. A transition is taking place, but it is often other people (parents and other family members, support professionals, employers, etc.) who are transitioning in how they see the individual's gender, and not the person themselves. For the person, these changes are often less of a transition and more of an evolution." Harmony is sought in various ways to include:

- Social – Changing one's clothes, hairstyle, and name and/or pronouns
- Hormonal – Using hormone blockers or hormone therapy to bring about physical, mental, and/or emotional alignment
- Surgical – When gender-related physical traits are added, removed, or modified
- Legal – Changing one's birth certificate or driver's license

The website states that the transition experience is often a significant event in the person's life. "A public declaration of some kind where an individual communicates to others that aspects of themselves are different than others have assumed, and that they are now living consistently with who they know themselves to be, can be an empowering and liberating experience (and moving to those who get to share that moment with them)."

1.1.5. Gender and Sexual Orientation

As gender was shown to be different from sex, so too we must distinguish it from **sexual orientation** which concerns who we are physically, emotionally, and/or romantically attracted to. Hence, sexual orientation is interpersonal while gender is personal. We would be mistaken to state that a boy who plays princess is gay or that a girl who wears boy's clothing and has short hair is necessarily lesbian. The root of such errors comes from our confusing gender and sexual orientation. The way someone dresses or acts concerns gender expression and we cannot know what their sexual orientation is from these behaviors.



1.1.6. The Language of Gender

Before we move on in this module and into the rest of the book, it is critical to have a working knowledge of terms related to the study of gender. Consider the following:

- **Agender** – When someone does not identify with a gender
- **Cisgender** – When a person's gender identity matches their assigned sex at birth
- **FtM** – When a person is assigned a female sex at birth but whose gender identity is boy/man
- **Gender dysphoria** – When a person is unhappy or dissatisfied with their gender and can occur in relation to any dimension

of gender. The person may experience mild discomfort to unbearable distress.
- **Genderfluid** – When a person's gender changes over time; they view gender as dynamic and changing
- **Gender role** – All the activities, functions, and behaviors that are expected of males and females by society
- **Genderqueer** – Anyone who does not identify with conventional gender identities, roles, expectations, or expression.
- **MtF** – When a person is assigned a male sex at birth but whose gender identity is girl/woman
- **Non-binary** – When a gender identity is not exclusively masculine or feminine
- **Transgender** – When a person's gender identity differs from their assigned sex

To learn more about gender, we encourage you to explore the https://www.genderspectrum.org/(opens in new window) website. (opens in new window)

The World Health Organization also identifies two more key concepts in relation to gender. **Gender equality** is "the absence of discrimination on the basis of a person's sex in opportunities, the allocation of resources and benefits, or access to services" while **gender equity** refers to "the fairness and justice in the distribution of benefits and responsibilities between women and men." We will tackle these two issues throughout the book in numerous places.

Additional Resources:

- CBS News Report on the Gender Identity Terms You Need to Know – https://www.cbsnews.com/news/transgender-gender-identity-terms-glossary/
- Psychology Today article on the differences between sex and gender – https://www.psychologytoday.com/us/blog/the-how-and-why-sex-differences/201110/sex-difference-vs-gender-difference-oh-im-so-confused
- Getting ahead a bit, but here is an article from Psychology Today on sex differences and whether they are real – https://www.psychologytoday.com/us/articles/201711/the-truth-about-sex-differences

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1.2. Movements Linked to Gender

Section Learning Objectives

- Define feminism.
- Outline the three waves of feminism.
- List and describe the types of feminism.
- Describe and exemplify types of movements related to men.

1.2.1. Feminism

Simply, **feminism** states that men and women should be equal socially, economically, and politically. According to Ropers-Huilman (2002) feminist theory is grounded in three main principles. First, is the assertion that women having something of value to contribute to every aspect of the world. Second, due to oppression, women have not been able to achieve their full potential or gain full participation in society. Third, feminist research should go beyond just critiquing and include social transformation.



Feminism has developed over three waves. The first, occurring during the late 19th to early 20th centuries, was linked to the women's suffragist movement and obtaining the right to vote for women, as well as abolitionism. Key figures included Elizabeth Cady Stanton who convened the Seneca Falls Convention in July 1848 at which it was proposed in the "Declaration of Sentiments" that women be given the right to vote, Susan B. Anthony who started the National Woman Suffrage Association (NWSA) with Stanton, Lucretia Mott, and Matilda Joslyn Gage. The second wave spanned the 1960s to the 1990s and unfolded during the antiwar and civil rights movements and drew in women of color as well as women from developing nations. During this time, Title VII of the Civil Rights Act of 1964 was passed and the National Organization for the Women was started. On January 22, 1973 the *Roe v. Wade* decision made abortion legal with the Supreme Court asserting that a woman's right to an abortion was implicit in the right to privacy which was protected in the 14th amendment. Finally, the third wave began in the 1990s and continues until today. Feminists in this wave are proud to wear tattoos, lipstick, and high heels, and display cleavage.

Feminism also takes several forms. First, *liberal feminism* was rooted in the first wave and seeks to level the playing field so that women can pursue the same opportunities that men can. It also attempts to dispel the belief that women are by nature not as intelligent or physically capable as men. Second, *radical feminism* states that its liberal counterpart is not drastic enough to address centuries of oppression on the individual, institutional, and systemic levels. It seeks to have society place higher value on feminine qualities which they believe would lessen gender oppression.

Third, *multicultural feminism* suggests that women in a country such as the United States have different interconnected identities. Fourth, *eco feminism* links the destruction of the planet with the exploitation of women worldwide by the patriarchy. It investigates racism, socioeconomic privilege, and speciesism. Fifth, *cultural feminism* states that fundamental differences exist between men and women and those special qualities of women should be celebrated.

1.2.2. Men's Movements

Interestingly, movements geared to men take on three forms according to Fox (2004). First, the *mythopoetic men's movement* focuses inward and on interpersonal issues related to their own manhood. They believe that modern society has feminized men and use self-help approaches to bring men back into manhood. They are characterized by such groups as the ManKind Project and Promise Keepers. In terms of the former, their website states: "The ManKind Project empowers men to missions of service, supporting men to make a difference in the lives of others – men, women, and children around the world. We help men through any transition, men at all levels of success, men facing almost any challenge. Our flagship training, is described by many as the most powerful men's training available: New Warrior Training Adventure. The ManKind Project (MKP) is not affiliated with any religious practice or political party. We strive to be increasingly inclusive and affirming of cultural differences, especially with respect to color, class, sexual orientation, faith, age, ability, ethnicity, and nationality." The New Warrior Training Adventure is described as a "modern male initiation and self-examination" that has men stop living vicariously through movies, television, an addiction and to step into their own adventure. For more on the ManKind Project, please visit: https://mankindproject.org/(opens in new window). (opens in new window)

In terms of the Promise Keepers, their website states that masculinity is in crisis and the soul of men is at stake due to

society turning up its nose to biblical definitions of manhood. They write, “Men are seeking authentic relationships and real connections. They long to be men of influence within the workplace, among their friends, and within their own households. But these connections, these relationships, these identities are difficult to establish and maintain successfully.” They cite 7 promises – honor, brotherhood, virtue, commitment, changemaking, unity, and obedience. For more on the Promise Keepers, please visit: https://promisekeepers.org/(opens in new window).(opens in new window)

Second, some men’s movements are pro-feminist such as the National Organization for Men Against Sexism (NOMAS). In their Statement of Principles, they write, “NOMAS advocates a perspective that is pro-feminist, gay affirmative, anti-racist, dedicated to enhancing men’s lives, and committed to justice on a broad range of social issues including class, age, religion, and physical abilities… We believe that the new opportunities becoming available to women and men will be beneficial to both. Men can live as happier and more fulfilled human beings by challenging the old-fashioned rules of masculinity that embody the assumption of male superiority. Traditional masculinity includes many positive characteristics in which we take pride and find strength, but it also contains qualities that have limited and harmed us.” They call on men to spend more time with their children, have intimacy and trust with other men, display emotional expressiveness, build their identity around more than just a career, rethink a man’s obsession with winning, unlearn aggressiveness, and to not fear femininity. For more on the group, please visit: http://nomas.org/(opens in new window). (opens in new window)

And not surprisingly, some of these movements are geared to the rights of men such as the National Coalition for Men (NCFM) and focus on legislative, political, and cultural change. They write, “Perhaps you are a victim of paternity fraud, lost your children in family court, were falsely accused of a gender targeted crime, were denied health services or protection by a domestic violence shelter… the list of possible discrimination’s against males is seemingly endless. Here, you may quickly realize that you are not alone…you are among friends.” To learn more about NCFM, please visit: https://ncfm.org/(opens in new window). As well, the website, www.avoiceformen.com(opens in new window) states its mission is, “… to provide education and encouragement to men and boys; to lift them above the din of misandry, to reject the unhealthy demands of gynocentrism in all its forms, and to promote their mental, physical and financial well-being without compromise or apology.”

1.3. Connecting with Other Psychologists of Gender

Section Learning Objectives

- Clarify what it means to communicate findings.
- Identify professional societies related to the study of gender and related issues.
- Identify publications related to the study of gender and related issues.

One of the functions of science is to *communicate* findings. Testing hypotheses, developing sound methodology, accurately analyzing data, and drawing cogent conclusions are important, but you must tell others what you have done too. This is accomplished via joining professional societies and submitting articles to peer reviewed journals. Below are some of the societies and journals important to the study of gender and related issues.

1.3.1. Professional Societies

- **APA Division 35 – Society for the Psychology of Women**
  - Website – https://www.apa.org/about/division/div35(opens in new window)
  - Mission Statement – “Division 35: Society for the Psychology of Women provides an organizational base for all feminists, women and men of all national origins, who are interested in teaching, research, or practice in the psychology of women. The division recognizes a diversity of women’s experiences which result from a variety of factors, including ethnicity, culture, language, socioeconomic status, age and sexual orientation. The division promotes feminist research, theories, education, and practice toward understanding and improving the lives of girls and women in all their diversities; encourages scholarship on the social construction of gender relations across multicultural contexts; applies its scholarship to transforming the knowledge base of psychology; advocates action toward public policies that advance equality and social justice; and seeks to empower women in community, national and global leadership.”
  - Publication – Psychology of Women Quarterly (journal) and Feminist Psychologist (quarterly newsletter)
  - *Other Information – The division has 5 special sections for the psychology of black women; concerns of Hispanics women/Latinas; lesbian, bisexual, and transgender concerns; psychology of Asian Pacific American women; and Alaska Native/American Indian/Indigenous women.*

- **APA Division 44 – Society for the Psychology of Sexual Orientation and Gender Diversity**
  - Website – https://www.apadivisions.org/division-44(opens in new window)
  - Mission Statement – "Div. 44 (SPSOGD) is committed to advancing social justice in all its activities. The Society celebrates the diversity of lesbian, gay, bisexual, transgender and gender nonconforming and queer people and recognizes the importance of multiple, intersectional dimensions of diversity including but not limited to: race, ethnicity, ability, age, citizenship, health status, language, nationality, religion and social class."
  - Publication – Psychology of Sexual Orientation and Gender Diversity (journal) and Division 44 Newsletter

- **APA Division 51 – Society for the Psychological Study of Men and Masculinities**
  - Website – https://www.apa.org/about/division/div51(opens in new window)
  - Mission Statement – "Division 51: Society for the Psychological Study of Men and Masculinities (SPSMM) advances knowledge in the new psychology of men through research, education, training, public policy and improved clinical services for men. SPSMM provides a forum for members to discuss the critical issues facing men of all races, classes, ethnicities, sexual orientations and nationalities."
  - Publication – Psychology of Men and Masculinities (journal)
  - *Other Information – The division has five special interest groups focused on applied and professional practice, racial ethnic minorities, sexual and gender minorities, students, and violence and trauma.*

1.3.2. Publications

- **Psychology of Women Quarterly**
  - Website: https://journals.sagepub.com/home/PWQ
  - Published by: APA Division 35
  - Description: "The *Psychology of Women Quarterly* (*PWQ*) is a feminist, scientific, peer-reviewed journal that publishes empirical research, critical reviews and theoretical articles that advance a field of inquiry, teaching briefs and invited book reviews related to the psychology of women and gender." Topics include violence against women, sexism, lifespan development and change, therapeutic interventions, sexuality, and social activism."

- **Psychology of Sexual Orientation and Gender Diversity**
  - Website: https://www.apadivisions.org/division-44/publications/journal
  - Published by: Division 44 of APA
  - Description: "A quarterly scholarly journal dedicated to the dissemination of information in the field of sexual orientation and gender diversity, *PSOGD* is envisioned as the primary outlet for research particularly as it impacts practice, education, public policy, and social action."

- ***Psychology of Men & Masculinities***
  - Website: https://www.apa.org/pubs/journals/men
  - Published by: Division 51 of APA
  - Description: "*Psychology of Men & Masculinities* is devoted to the dissemination of research, theory, and clinical scholarship that advances the psychology of men and masculinity. This discipline is defined broadly as the study of how boys' and men's psychology is influenced and shaped by both gender and sex, and encompasses the study of the social construction of gender, sex differences and similarities, and biological processes."

- **Journal of Gender Studies**
  - Website: https://tandfonline.com/toc/cjgs20/current
  - Published by: Taylor and Francis
  - Description: "The *Journal of Gender Studies* is an interdisciplinary journal which publishes articles relating to gender and sex from a feminist perspective covering a wide range of subject areas including the Social, Natural and Health Sciences, the Arts, Humanities, Literature and Popular Culture. We seek articles from around the world that examine gender and the social construction of relationships among genders."

- **International Journal of Gender and Women's Studies**
  - Website: http://ijgws.com/
  - Description: "*International Journal of Gender and Women's Studies* is an interdisciplinary international journal which publishes articles relating to gender and sex from a feminist perspective covering a wide range of subject areas including the social and natural sciences, the arts, the humanities and popular culture. The journal seeks articles from around the world that examine gender and the social construction of relationships among genders."

- **Journal of Research in Gender Studies**
  - Website: https://addletonacademicpublishers.com/journal-of-research-in-gender-studies
  - Published by: Addleton Academic Publishers
  - Description: "The***Journal of Research in Gender Studies***publishes mainly original empirical research and review articles focusing on hot emerging topics, e.g. same-sex parenting, civil partnership, LGBTQ+ rights, mobile dating applications, digital feminist activism, sexting behavior, robot sex, commercial sex online, etc."

- **Journal of Gay and Lesbian Mental Health**
  - Website: https://www.tandfonline.com/action/journalInformation?show=aimsScope&journalCode=wglm20
  - Published by: Taylor and Francis
  - Description: "*Journal of Gay & Lesbian Mental Health* seeks out and publishes the most current clinical and research scholarship on LGBT mental health with a focus on clinical issues."

Module Recap

If you asked a friend or family member what the difference between sex and gender was, they would likely state that they are synonyms for one another or can be used interchangeably. After reading this module, you know that this is incorrect and that sex is a biological concept while gender is socially constructed. Gender is further complicated by the fact that it consists of the three dimensions of body, identity, and social. As human beings, we have a psychological need to have gender congruence or a sense of harmony in our gender, though at times to get there we have to transition. We also contrasted gender and sexual orientation and outlined some of the language of gender you will encounter throughout this book. Movements linked to gender include feminism and men's movements, the latter which were said to be either mythopoetic, pro-feminist, or men's rights focused. Finally, we featured three divisions of the American Psychological Association which study gender and several journals that publish research on it, all in an effort to communicate findings and connect with other psychologists studying gender.

In our next module, we will discuss how psychology as a discipline is scientific and demonstrate the ways in which the psychology of gender is studied. This discussion will conclude Part I: Setting the Stage of this book.

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1.2: Module 2 – Studying Gender Using the Scientific Method

Module 2: Studying Gender Using the Scientific Method

Module Overview

In Module 2 we will address the fact that psychology is the *scientific* study of behavior and mental processes. We will do this by examining the steps of the scientific method and describing the five major designs used in psychological research. We will also differentiate between reliability and validity and their importance for measurement. Psychology has very clear ethical standards and procedures for scientific research. We will discuss these but also why they are needed. The content of this module relates to all areas of psychology, but we will also point out some methods used in the study of gender that may not be used in other subfields as frequently or at all.

Module Outline

- 2.1. The Scientific Method
- 2.2. Research Designs Used in the Study of Gender Issues
- 2.3. Reliability and Validity
- 2.4. Research Ethics

Module Learning Outcomes

- Clarify what it means for psychology to be scientific by examining the steps of the scientific method and the three cardinal features of science.
- Outline the five main research methods used in psychology and clarify how they are utilized in social psychology.
- Differentiate and explain the concepts of reliability and validity.
- Describe key features of research ethics.

2.1. The Scientific Method

Section Learning Objectives

- Define scientific method.
- Outline and describe the steps of the scientific method, defining all key terms.
- Identify and clarify the importance of the three cardinal features of science.

In Module 1, we learned that psychology was the scientific study of behavior and mental processes. We will spend quite a lot of time on the behavior and mental processes part, but before we proceed, it is prudent to elaborate more on what makes psychology scientific. In fact, it is safe to say that most people not within our discipline or a sister science, would be surprised to learn that psychology utilizes the scientific method at all.

So what is the scientific method? Simply, the **scientific method** is a systematic method for gathering knowledge about the world around us. The key word here is that it is systematic meaning there is a set way to use it. What is that way? Well, depending on what source you look at it can include a varying number of steps. For our purposes, the following will be used:



Table 2.1: The Steps of the Scientific Method

Step	Name	Description
0	Ask questions and be willing to wonder.	To study the world around us you have to wonder about it. This inquisitive nature is the hallmark of **critical thinking,** or our ability to assess claims made by others and make objective judgments that are independent of emotion and anecdote and based on hard evidence and required to be a scientist. We might wonder if men engaged in a heterosexual relationship act differently when communicating with their significant other on a date than with close male friends while watching a football game in the Man Cave.
1	Generate a research question or identify a problem to investigate.	Through our wonderment about the world around us and why events occur as they do, we begin to ask questions that require further investigation to arrive at an answer. This investigation usually starts with a **literature review**, or when we conduct a literature search through our university library or a search engine such as Google Scholar to see what questions have been investigated already and what answers have been found, so that we can identify **gaps** or holes in this body of work. For instance, in relation to communication and gender, we would execute a search using those words as our parameters. Google Scholar and similar search engines would look for communication and gender in the key words authors identify when writing their abstract. The search would likely return quite a few articles at which time you would pick and choose which ones to read from the *abstracts* (the short summary of what the article is about; it is sort of like the description of a book found on the back cover or sometimes the inside cover of a book jacket). As you read articles you would try and figure out what has and has not been done to give your future research project direction.
2	Attempt to explain the phenomena we wish to study.	We now attempt to formulate an explanation of why the event occurs as it does. This systematic explanation of a phenomenon is a **theory** and our specific, testable prediction is the **hypothesis.** We will know if our theory is correct because we have formulated a hypothesis which we can now test. In the case of our example, we might develop a general theory of communication which states that individuals will alter their communication style depending on who they are speaking to and the situational context. We could hypothesize that males on a date with a female may act more formal and restrained than a male watching a football game with friends. We might even (likely in future studies) examine if this effect goes away if their girlfriend/wife enjoys watching sports too or how a man may interact with friends in other contexts than sports events. We might even examine cultural norms for such interactions. Really, the sky is the limit here and we can introduce other group dynamics and relationships to examine communication patterns in a more universal way.

Step	Name	Description
3	Test the hypothesis.	It goes without saying that if we cannot test our hypothesis, then we cannot show whether our prediction is correct or not. Our plan of action of how we will go about testing the hypothesis is called our **research design**. In the planning stage, we will select the appropriate research method to answer our question/test our hypothesis. In this case we might wish to use naturalistic observation to watch heterosexual couples on a date and then groups of males watching a football game in a public place. Alternatively, we could use a survey method and ask the man's friends and significant other to describe his behavior in a variety of situations. We might employ a case study or experimental procedure as well. More on these in the next section.
4	Interpret the results.	With our research study done, we now examine the data to see if the pattern we predicted exists. We need to see if a cause and effect statement can be made, assuming our method allows for this inference. The statistics we use take on two forms. First, there are **descriptive statistics** which provide a means of summarizing or describing data and presenting the data in a usable form. You likely have heard of the mean or average, median, and mode. Along with standard deviation and variance, these are ways to describe our data. Second, there are **inferential statistics** which allow for the analysis of two or more sets of numerical data to determine the **statistical significance** of the results. Significance is an indication of how confident we are that our results are due to our manipulation or design and not chance. Typically we set this significance at no higher than 5% due to chance.
5	Draw conclusions carefully.	We need to accurately interpret our results and not overstate our findings. To do this, we need to be aware of our biases and avoid emotional reasoning so that they do not cloud our judgment. How so? In our effort to stop a child from engaging in self-injurious behavior that could cause substantial harm or even death, we might overstate the success of our treatment method. In the case of our communication study, if we are a male experimenter, we may downplay or suppress unfavorable results about communication patterns of males when interacting with friends than our girlfriend/wife.
6	Communicate our findings to the larger scientific community.	Once we have decided on whether our hypothesis is correct or not, we need to share this information with others so that they might comment critically on our methodology, statistical analyses, and conclusions. Sharing also allows for **replication** or repeating the study to confirm its results. Communication is accomplished via scientific journals, conferences, or newsletters released by many of the organizations mentioned in Section 1.3.

Science has at its root three *cardinal feature*s that we will see play out time and time again throughout this book. They are:

1. *Observation* – In order to know about the world around us we must be able to see it firsthand. In relation to the study of gender issues, we have chosen our hypothesis to test because in the past we believe we have seen a pattern in how males interact with male friends and their female significant other and now want to test to see if it is correct. As part of our research design, we could use naturalistic observation to gather data.
2. *Experimentation* – To be able to make *causal* or cause and effect statements, we must be able to isolate variables. We have to manipulate one variable and see the effect of doing so on another variable. Experimentation is a major method used by psychologists studying gender to test its hypotheses.
3. *Measurement* – How do we know whether or not males interact differently with male friends or the female significant other? As you might expect, we would gather data through observation and counting each time a specific behavior was performed, or by using a survey and subsequently correlating variables. With either research design, we are measuring the variable called communication and though we are looking for differences within males as a group we could expand our research in the future to look for differences across genders or even other relationship types. It is important for researchers to ensure the scales that are used measure the actual variable they are interested in and they can make conclusions beyond the experimental situation. Likewise, we need to make sure the same results are obtained across raters (i.e. interrater) such as in the case of observation, or if the same person took a survey at different times (such as pre and posttest; i.e. intra-rater). More on what are called validity and reliability, respectively, in Section 2.3. These concepts are very important where measurement is concerned and help us to know that the conclusions we infer from our data are drawn from sources or techniques we can trust.

2.2. Research Designs Used in the Study of Gender Issues

Section Learning Objectives

- List the five main research methods used in psychology.
- Describe observational research, listing its advantages and disadvantages.
- Describe case study research, listing its advantages and disadvantages.
- Describe survey research, listing its advantages and disadvantages.
- Describe correlational research, listing its advantages and disadvantages.
- Describe experimental research, listing its advantages and disadvantages.
- State the utility and need for multimethod research.

Step 3 called on the scientist to test his or her hypothesis. Psychology as a discipline uses five main research designs. These include observational research, case studies, surveys, correlational designs, and experiments. Note that research can take two forms, one focused on numbers and called **quantitative** and the other focused on words or descriptions and called **qualitative**. Be advised that the latter is not readily accepted within the field of psychology which traditionally has used the quantitative approach to conduct statistical analyses for which significance could be determined. It is, or maybe has been, believed that because the qualitative approach could not be reduced to numbers for analysis, it is more subjective while the quantitative approach is more objective, an important feature/requirement for science. Fortunately, we have new computer software programs that can analyze qualitative responses for trends which adds weight to any conclusions drawn from this type of data.

2.2.1. Observational Research

In terms of **naturalistic observation**, the scientist studies human or animal behavior in its natural environment which could include the home, school, or a forest. The researcher counts, measures, and rates behavior in a systematic way and at times uses multiple judges to ensure accuracy in how the behavior is being measured. This is called *inter-rater reliability* as you will see in Section 2.3. The advantage of this method is that you witness behavior as it occurs and it is not tainted by the experimenter. The disadvantage is that it could take a long time for the behavior to occur and if the researcher is detected then this may influence the behavior of those being observed. In the case of the latter, the behavior of the observed becomes *artificial*.

Laboratory observation involves observing people or animals in a laboratory setting. The researcher might want to know more about parent-child interactions and so brings a mother and her child into the lab to engage in preplanned tasks such as playing with toys, eating a meal, or the mother leaving the room for a short period of time. The advantage of this method over the naturalistic method is that the experimenter can use sophisticated equipment and videotape the session to examine it at a later time. The problem is that since the subjects know the experimenter is watching them, their behavior could become artificial from the start.

2.2.1.1. Example of a psychology of gender study utilizing observation. Olino et al. (2012) indicate that a growing body of literature points to gender differences in child temperament and adult personality traits throughout life but that many of these studies rely solely on parent-report measures. Their investigation used parental-report, maternal-report, and laboratory observation. The laboratory batteries took approximately two hours and children were exposed to standardized laboratory episodes with a female experimenter. These episodes were intended to elicit individual differences in temperament traits as they relate to behavioral engagement, social behavior, and emotionality. They included Risk Room, when children explore a set of novel, ambiguous stimuli such as a black box; Stranger Approach or when the child is left alone in the room briefly and a male research accomplice enters the room and speaks to the child; Pop-up Snakes or when the child and experimenter surprise the child's mother with a can of potato chips that contain coiled snakes, and Painting a Picture which allowed the child to play with watercolor pencils and crayons. Observers assigned a 1 for low intensity, 2 for moderate intensity, and 3 for high intensity in relation to facial, bodily, and vocal positive affect, fear, sadness, and anger displays. Outside of these affective codes, observers also used behavioral codes on a similar three-point scale to assess engagement, sociability, activity, and impulsivity. The sample included 463 boys and 402 girls.

Across the three different measures, girls showed higher positive affect and fear and lower activity level compared to boys. When observed in the laboratory, girls showed higher levels of sociability but lower levels of negative emotionality, anger, sadness, and impulsive behavior. Maternal reports showed higher levels of overall negative emotionality and sadness for girls while paternal reports showed higher levels of sociability for boys.

Read the study for yourself: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3532859/(opens in new window) (opens in new window)

2.2.2. Case Studies

Psychology can also utilize a detailed description of one person or a small group based on careful observation. This was the

approach the founder of psychoanalysis, Sigmund Freud, took to develop his theories. The advantage of this method is that you arrive at a rich description of the behavior being investigated but the disadvantage is that what you are learning may be unrepresentative of the larger population and so lacks **generalizability**. Again, bear in mind that you are studying one person or a very small group. Can you possibly make conclusions about all people from just one or even five or ten? The other issue is that the case study is subject to the bias of the researcher in terms of what is included in the final write up and what is left out. Despite these limitations, case studies can lead us to novel ideas about the cause of behavior and help us to study unusual conditions that occur too infrequently to study with large sample sizes and in a systematic way.

2.2.2.1. Example of a psychology of gender study utilizing a case study. Mukaddes (2002) studied cross-gender behavior in children with high functioning autism. Specifically, two boys were followed over a period of about four years who showed persistent gender identity problems. Case 2, called A.A., was a 7-year old boy referred to a child psychiatry department in Turkey due to language delay and issues with social interaction. The author goes on to describe in detail the family history and how the child showed a "persistent attachment to his mother's and some significant female relative's clothes and especially liked to make skirts out of their scarves. After age 5 years, he started to 'playhouse' and 'play mother roles'... His parents have tried to establish good bonding between him with his father as an identification object. Despite this, his cross-gender behaviours are persistent (pg. 531)." In the discussion of both cases, the authors note that the report of cross-gender behavior in autistic cases is rare, and that their case study attempts to, "...underline that (1) diagnosis of GID in autistic individuals with a long follow-up seems possible; and (2) high functioning verbally able autistic individuals can express their gender preferences as well as other personal preferences" (pg. 532).

To learn more about observational and case study designs, please take a look at our Research Methods in Psychology textbook by visiting:

https://kpu.pressbooks.pub/psychmethods4e/chapter/observational-research/(opens in new window)

2.2.3. Surveys/Self-Report Data

As **survey** is a questionnaire consisting of at least one scale with some number of questions which assess a psychological construct of interest such as parenting style, depression, locus of control, communication, attitudes, or sensation seeking behavior. It may be administered by paper and pencil or computer. Surveys allow for the collection of large amounts of data quickly but the actual survey could be tedious for the participant and **social desirability**, when a participant answers questions dishonestly so that he/she is seen in a more favorable light, could be an issue. For instance, if you are asking high school students about their sexual activity, they may not give genuine answers for fear that their parents will find out. Or if you wanted to know about prejudicial attitudes of a group of people, you could use the survey method. You could alternatively gather this information via an interview in a structured or unstructured fashion. Important to survey research is that you have **random sampling** or when everyone in the population has an equal chance of being included in the sample. This helps the survey to be representative of the population and in terms of key demographic variables such as gender, age, ethnicity, race, sexual orientation, education level, and religious orientation.

2.2.3.1. Example of a psychology of gender study utilizing a survey. Weiser (2004) wanted to see to what extent a gender gap existed in internet use. Utilizing a 19-item survey given to introductory psychology students, he found that males used the internet for entertainment and leisure activities while females used it for interpersonal communication and educational activities. Interestingly, he found that age and internet experience mediated the gender differences.

To learn more about the survey research design, please take a look at our Research Methods in Psychology textbook by visiting:

https://kpu.pressbooks.pub/psychmethods4e/chapter/overview-of-survey-research/(opens in new window)

2.2.4. Correlational Research

This research method examines the relationship between two variables or two groups of variables. A numerical measure of the strength of this relationship is derived, called the *correlation coefficient*, and can range from -1.00, a perfect inverse relationship meaning that as one variable goes up the other goes down, to 0 or no relationship at all, to +1.00 or a perfect relationship in which as one variable goes up or down so does the other. In terms of a negative correlation we might say that as a parent becomes more rigid, controlling, and cold, the attachment of the child to parent goes down. In contrast, as a parent becomes warmer, more loving, and provides structure, the child becomes more attached. The advantage of correlational research is that you can correlate anything. The disadvantage is that you can correlate anything. Variables that really do not have any relationship to one another could be viewed as related. Yes. This is both an advantage and a disadvantage. For instance, we might correlate instances of

making peanut butter and jelly sandwiches with someone we are attracted to sitting near us at lunch. Are the two related? Not likely, unless you make a really good PB&J but then the person is probably only interested in you for food and not companionship. The main issue here is that correlation *does not* allow you to make a causal statement.

2.2.4.1. Example of a psychology of gender study utilizing a correlational method. In a study investigating the relationship of gender role identity, support for feminism, and willingness to consider oneself a feminist, Toller, Suter, and Trautman (2004) found that when men scored high on the Sexual Identity Scale which indicates high levels of femininity, they were supportive of the women's movement and were more willing to consider themselves a feminist (positive correlations). In contrast, high scores on the Personal Attributes Questionnaire (PAQ) masculinity index resulted in reports of being less likely to consider themselves a feminist (a negative correlation). In terms of female participants, a positive correlation was found between highly masculine women and positive attitudes toward nontraditional gender roles. The authors note, "Possible explanations for these findings may be that women often describe feminists with masculine traits, such as "dominating" and "aggressive." Thus, the more feminine women in our study may have viewed feminism and nontraditional gender roles as masculine."

To learn more about the correlational research design, please take a look at our Research Methods in Psychology textbook by visiting:

https://kpu.pressbooks.pub/psychmethods4e/chapter/correlational-research/(opens in new window)

2.2.5. Experiments

An **experiment** is a controlled test of a hypothesis in which a researcher manipulates one variable and measures its effect on another variable. The variable that is manipulated is called the **independent variable (IV)** and the one that is measured is called the **dependent variable (DV)**. A common feature of experiments is to have a **control group** that does not receive the treatment or is not manipulated and an **experimental group** that does receive the treatment or manipulation. If the experiment includes **random assignment** participants have an equal chance of being placed in the control or experimental group. The control group allows the researcher to make a *comparison* to the experimental group, making a causal statement possible, and stronger.

2.2.5.1. Example of an experimental psychology of gender study. Wirth and Bodenhausen (2009) investigated whether gender played a moderating role in the stigma of mental illness in a web-based survey experiment. They asked participants to read a case summary in which the patient's gender was manipulated along with the type of disorder. These cases were either of male-typical or female-typical disorders. Their results showed that when the cases were gender typical, participants were less sympathetic, showed more negative affect, and were less likely to help than if the cases were gender atypical. The authors proposed that the gender-typical cases were much less likely to be seen as genuine mental disturbances by the participants.

To learn more about the experimental research design, please take a look at our Research Methods in Psychology textbook by visiting:

https://kpu.pressbooks.pub/psychmethods4e/part/experimental-research/(opens in new window)

2.2.6. Multi-Method Research

As you have seen above, no single method alone is perfect. All have their strengths and limitations. As such, for the psychologist to provide the clearest picture of what is affecting behavior or mental processes, several of these approaches are typically employed at different stages of the research process. This is called **multi-method research.**

2.2.7. Archival Research

Another technique used by psychologists is called **archival research** or when the researcher analyzes data that has already been collected and for another purpose. For instance, a researcher may request data from high schools about student's GPA and their SAT and/or ACT score(s) and then obtain their four-year GPA from the university they attended. This can be used to make a prediction about success in college and which measure – GPA or standardized test score – is the better predictor.

2.2.8. Meta-Analysis

Meta-analysis is a statistical procedure that allows a researcher to combine data from more than one study. For instance, Marx and Kettrey (2016) evaluated the association between the presence of Gay-straight alliances (GSAs) for LGBTQ+ youth and their

allies and the youth's self-reported victimization. In all, the results of 15 studies spanning 2001 to 2014 were combined for a final sample of 62,923 participants and indicated that when a GSA is present, homophobic victimization, fear for safety, and hearing homophobic remarks is significantly lower. The authors state, "The findings of this meta-analysis should therefore be of value to advocates, educators, and policymakers who are interested in alleviating school-based victimization of youth, as those adolescents who are perceived to be LGBTQ? are at a marked risk for such victimization."

2.2.9. Communicating Results

In scientific research, it is common practice to communicate the findings of our investigation. By reporting what we found in our study other researchers can critique our methodology and address our limitations. Publishing allows psychology to grow its knowledge base about human behavior. We can also see where gaps still exist. We move it into the *public domain* so others can read and comment on it. Scientists can also replicate what we did and possibly extend our work if it is published.

There are several ways to communicate our findings. We can do so at conferences in the form of posters or oral presentations, through newsletters from APA itself or one of its many divisions or other organizations, or through research journals and specifically scientific research articles. Published journal articles represent a form of communication between scientists and in them, the researchers describe how their work relates to previous research, how it replicates and/or extends this work, and what their work might mean theoretically.

Research articles begin with an **abstract** or a 150-250-word summary of the entire article. The purpose is to describe the experiment and allows the reader to make a decision about whether he or she wants to read it further. The abstract provides a statement of purpose, overview of the methods, main results, and a brief statement of the conclusion. Key words are also given that allow for students and other researchers alike to find the article when doing a search.

The abstract is followed by four major sections as described:

- **Introduction** – The first section is designed to provide a summary of the current literature as it relates to your topic. It helps the reader to see how you arrived at your hypothesis and the design of your study. Essentially, it gives the logic behind the decisions you made. You also state the purpose and share your predictions or hypothesis.
- **Method** – Since replication is a required element of science, we must have a way to share information on our design and sample with readers. This is the essence of the method section and covers three major aspects of your study – your participants, materials or apparatus, and procedure. The reader needs to know who was in your study so that limitations related to generalizability of your findings can be identified and investigated in the future. You will also state your operational definition, describe any groups you used, random sampling or assignment procedures, information about how a scale was scored, etc. Think of the Method section as a cookbook. The participants are your ingredients, the materials or apparatus are whatever tools you will need, and the procedure is the instructions for how to bake the cake.
- **Results** – In this section you state the outcome of your experiment and whether they were statistically significant or not. You can also present tables and figures.
- **Discussion** – In this section you start by restating the main findings and hypothesis of the study. Next, you offer an interpretation of the findings and what their significance might be. Finally, you state strengths and limitations of the study which will allow you to propose future directions.

Whether you are writing a research paper for a class or preparing an article for

publication, or reading a research article, the structure and function of a research article is the same. Understanding this will help you when reading psychology of gender research articles.

2.3. Reliability and Validity

Section Learning Objectives

- Clarify why reliability and validity are important.
- Define reliability and list and describe forms it takes.
- Define validity and list and describe forms it takes.

Recall that measurement involves the assignment of scores to an individual which are used to represent aspects of the individual such as how conscientious they are or their level of depression. Whether or not the scores actually represent the individual is what

is in question. Cuttler (2019) says in her book Research Methods in Psychology, "Psychologists do not simply *assume* that their measures work. Instead, they collect data to *demonstrate* that they work. If their research does not demonstrate that a measure works, they stop using it." So how do they demonstrate that a measure works? This is where reliability and validity come in.

2.3.1. Reliability

First, **reliability** describes how consistent a measure is. It can be measured in terms of **test-retest reliability**, or how reliable the measure is across time, **internal consistency**, or the "consistency of people's responses across the items on a multiple-item measure," (Cuttler, 2019), and finally **inter-rater reliability**, or how consistent different observers are when making judgments. In terms of inter-rater reliability, Cuttler (2019) writes, "If you were interested in measuring university students' social skills, you could make video recordings of them as they interacted with another student whom they are meeting for the first time. Then you could have two or more observers watch the videos and rate each student's level of social skills. To the extent that each participant does, in fact, have some level of social skills that can be detected by an attentive observer, different observers' ratings should be highly correlated with each other."

2.3.2. Validity

A measure is considered to be **valid** if its scores represent the variable it is said to measure. For instance, if a scale says it measures depression, and it does, then we can say it is valid. Validity can take many forms. First, **face validity** is "the extent to which a measurement method appears "on its face" to measure the construct of interest" (Cuttler, 2019). A scale purported to measure values should have questions about values such as benevolence, conformity, and self-direction, and not questions about depression or attitudes toward toilet paper.

Content validity is to what degree a measure covers the construct of interest. Cuttler (2019) says, "... consider that attitudes are usually defined as involving thoughts, feelings, and actions toward something. By this conceptual definition, a person has a positive attitude toward exercise to the extent that he or she thinks positive thoughts about exercising, feels good about exercising, and actually exercises."

Often times, we expect a person's scores on one measure to be correlated with scores on another measure that we expect it to be related to, called **criterion validity**. For instance, consider parenting style and attachment. We would expect that if a person indicates on one scale that their father was authoritarian (or dictatorial) then attachment would be low or insecure. In contrast, if the mother was authoritative (or democratic) we would expect the child to show a secure attachment style.

As researchers we expect that our results will generalize from our sample to the larger population. This was the issue with case studies as the sample is too small to make conclusions about everyone. If our results do generalize from the circumstances under which our study was conducted to similar situations, then we can say our study has **external validity**. External validity is also affected by how real the research is. Two types of realism are possible. First, **mundane realism** occurs when the research setting closely resembles the real world setting. **Experimental realism** is the degree to which the experimental procedures that are used feel real to the participant. It does not matter if they really mirror real life but that they only appear real to the participant. If so, his or her behavior will be more natural and less artificial.

In contrast, a study is said to have good **internal validity** when we can confidently say that the effect on the dependent variable (the one that is measured) was due solely to our manipulation or the independent variable. A **confound** occurs when a factor other than the independent variable leads to changes in the dependent variable.

To learn more about reliability and validity, please visit:

https://kpu.pressbooks.pub/psychmethods4e/chapter/reliability-and-validity-of-measurement/(opens in new window)

2.4. Research Ethics

Section Learning Objectives

- Exemplify instances of ethical misconduct in research.
- List and describe principles of research ethics.

Throughout this module so far, we have seen that it is important for researchers to understand the methods they are using. Equally important, they must understand and appreciate ethical standards in research. The American Psychological Association identifies high standards of ethics and conduct as one of its four main guiding principles or missions. To read about the other three, please visit https://www.apa.org/about/index.aspx(opens in new window). So why are ethical standards needed and what do they look like?



2.4.1. Milgram's Study on Learning...or Not

Possibly, the one psychologist students know about the most is Stanley Milgram, if not by name, then by his study on obedience using shock (Milgram, 1974). Essentially, two individuals came to each experimental session but only one of these two individuals was a participant. The other was what is called a **confederate** and part of the study without the participant knowing. The confederate was asked to pick heads or tails and then a coin was flipped. As you might expect, the confederate always won and chose to be the *learner*. The "experimenter," who was also a confederate, took him into one room where he was hooked up to wires and electrodes. This was done while the "teacher," the actual participant, watched and added to the realism of what was being done. The teacher was then taken into an adjacent room where he was seated in front of a shock generator. The teacher was told it was his task to read a series of word pairs to the learner. Upon completion of reading the list, he would ask the learner one of the two words and it was the learner's task to state what the other word in the pair was. If the learner incorrectly paired any of the words, he would be shocked. The shock generator started at 30 volts and increased in 15-volt increments up to 450 volts. The switches were labeled with terms such as "Slight shock," "Moderate shock," "Danger: Severe Shock," and the final two switches were ominously labeled "XXX."

As the experiment progressed, the teacher would hear the learner scream, holler, plead to be released, complain about a heart condition, or say nothing at all. When the learner stopped replying, the teacher would turn to the experimenter and ask what to do, to which the experimenter indicated for him to treat nonresponses as incorrect and shock the learner. Most participants asked the experimenter whether they should continue at various points in the experiment. The experimenter issued a series of commands to include, "Please continue," "It is absolutely essential that you continue," and "You have no other choice, you must go on."

Any guesses as to what happened? What percent of the participants would you hypothesize actually shocked the learner to death? Milgram found that 65 percent of participants/teachers shocked the learner to the XXX switches which would have killed him. Why? They were told to do so. How do you think the participant felt when they realized that they could kill someone simply because they were told to do so?

Source: Milgram, S. (1974). Obedience to authority. New York, NY: Harper Perennial.

If you would like to learn more about the moral foundations of ethical research, please visit:

kpu.pressbooks.pub/psychmethods4e/chapter/moral-foundations-of-ethical-research/

2.4.2. Ethical Guidelines

Due to these studies, and others, the American Psychological Association (APA) established guiding principles for conducting psychological research. The principles can be broken down in terms of when they should occur during the process of a person participating in the study.

2.4.2.1. Before participating. First, researchers must obtain **informed consent** or when the person agrees to participate because they are told what will happen to them. They are given information about any *risks* they face, or potential harm that could come to them, whether physical or psychological. They are also told about *confidentiality* or the person's right not to be identified. Since most research is conducted with students taking introductory psychology courses, they have to be given the right to do something other than a research study to likely earn required credits for the class. This is called an **alternative activity** and could take the form of reading and summarizing a research article. The amount of time taken to do this should not exceed the amount of time the student would be expected to participate in a study.

2.4.2.2. While participating. Participants are afforded the *ability to withdraw* or the person's right to exit the study if any discomfort is experienced.

2.4.2.3. After participating. Once their participation is over, participants should be **debriefed** or when the true purpose of the study is revealed and they are told where to go if they need assistance and how to reach the researcher if they have questions. So can researchers **deceive** participants, or intentionally withhold the true purpose of the study from them? According to the APA, a minimal amount of deception is allowed.

Human research must be approved by an **Institutional Review Board** or IRB. It is the IRB that will determine whether the researcher is providing enough information for the participant to give consent that is truly informed, if debriefing is adequate, and if any deception is allowed or not.

If you would like to learn more about how to use ethics in your research, please read:

kpu.pressbooks.pub/psychmethods4e/chapter/putting-ethics-into-practice/

Module Recap

In Module 1 we stated that psychology studied behavior and mental processes using the strict standards of science. In Module 2 we showed you how that is done via adoption of the scientific method and use of the research designs of observation, case study, surveys, correlation, and experiments. To make sure our measurement of a variable is sound, we need to have measures that can are reliable and valid. And to give our research legitimacy we have to use clear ethical standards for research to include gaining informed consent from participants, telling them of the risks, giving them the right to withdraw, debriefing them, and using nothing more than minimal deception.

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2: APPLYING SOCIAL AND DEVELOPMENTAL LENSES

2.1: Module 3 – Gender Through a Social Psychological Lens
2.2: Module 5 – Gender Through a Developmental Psychology Lens

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2.1: Module 3 – Gender Through a Social Psychological Lens

Module 3: Gender Through a Social Psychological Lens

Module Overview

In our third module we will put on a social psychological lens and tackle the complicated issues of relationships, stereotypes and aggression. We start by covering the need for affiliation that drives relationships and then consider factors affecting who we are attracted to. Loneliness and social rejection are discussed too as they can have a serious affect on mental health, discussed in more detail in Module 8. Mate selection strategies and specific types of relationships round out the first section, moving us into a discussion of stereotypes. We finish with information on aggression and its forms.

Module Outline

- 3.1. Relationships
- 3.2. Stereotypes
- 3.3. Aggression

Module Learning Outcomes

- Describe the need for affiliation and the negative effects of social rejection and loneliness.
- Clarify factors that increase interpersonal attraction between two people.
- Identify types of relationships and the components of love.
- Describe the Four Horsemen of the Apocalypse as they relate to relationship conflicts, how to resolve them, and the importance of forgiveness.
- Clarify how stereotypes drive prejudice and discrimination.
- Outline ways to promote and teach tolerance.
- Define aggression and its types.
- Identify and describe forms aggression can take.

3.1. Relationships

Section Learning Objectives

- Define interpersonal attraction.
- Define the need for affiliation.
- Report what the literature says about the need for affiliation.
- Define loneliness and identity its types.
- Describe the effect of loneliness on health.
- Describe social rejection and its relation to affiliation.
- Clarify how proximity affects interpersonal attractiveness.
- Clarify how familiarity affects interpersonal attractiveness.
- Clarify how beauty affects interpersonal attractiveness.
- Clarify how similarity affects interpersonal attractiveness.
- Clarify how reciprocity affects interpersonal attractiveness.
- Clarify how playing hard to get affects interpersonal attractiveness.
- Clarify how intimacy affects interpersonal attractiveness.
- Describe mate selection strategies used by men and women.
- List and describe types of relationships.
- Describe the importance of familial relationships.
- Describe the importance of friendships.

- Define love and describe its three components according to Sternberg.
- Define and describe jealousy.
- Describe Gottman's Four Horsemen of the Apocalypse.
- Propose antidotes to the horsemen.
- Clarify the importance of forgiveness in relationships.
- Clarify one potential factor on dissolution.



3.1.1. Defining Key Terms

Have you ever wondered why people are motivated to spend time with some people over others or why they chose the friends and significant others they do? If you have, you have given thought to **interpersonal attraction** or showing a preference for another person (remember, inter means between and so interpersonal is between people).

This relates to the **need to affiliate/belong** which is our motive to establish, maintain, or restore social relationships with others, whether individually or through groups (McClelland & Koestner, 1992). It is important to point out that we *affiliate* with people who accept us though are generally indifferent while we tend to *belong* to individuals who truly care about us and for whom we have an attachment. In terms of the former, you affiliate with your classmates and people you work with while you belong to your family or a committed relationship with your significant other or best friend. The literature shows that:

- Leaders high in the need for affiliation are more concerned about the needs of their followers and engaged in more transformational leadership due to affiliation moderating the interplay of achievement and power needs (Steinmann, Otting, & Maier, 2016).
- Who wants to take online courses? Seiver and Troja (2014) found that those high in the need for affiliation were less, and that those high in the need for autonomy were more, likely to want to take another online course. Their sample included college students enrolled in classroom courses who had taken at least one online course in the past.
- Though our need for affiliation is universal, it does not occur in every situation and individual differences and characteristics of the target can factor in. One such difference is religiosity and van Cappellen et al. (2017) found that religiosity was positively related to social affiliation except when the identity of the affiliation target was manipulated to be a threatening out-group member (an atheist). In this case, religiosity did not predict affiliation behaviors.
- Risk of exclusion from a group (not being affiliated) led individuals high in a need for inclusion/affiliation to engage in pro-group, but not pro-self, unethical behaviors (Thau et al., 2015).
- When affiliation goals are of central importance to a person, they perceive the estimated interpersonal distance between them and other people as smaller compared to participants primed with control words (Stel & van Koningsbruggen, 2015).

Loneliness occurs when our interpersonal relationships are not fulfilling and can lead to psychological discomfort. In reality, our relationships may be fine and so our *perception* of being alone is what matters most and can be particularly troublesome for the elderly. Tiwari (2013) points out that loneliness can take three forms. First, *situational loneliness* occurs when unpleasant experiences, interpersonal conflicts, disaster, or accidents lead to loneliness. Second, *developmental loneliness* occurs when a

person cannot balance the need to relate to others with a need for individualism, which "results in loss of meaning from their life which in turn leads to emptiness and loneliness in that person." Third, *internal loneliness* arises when a person has low self-esteem and low self-worth and can be caused by locus of control, guilt or worthlessness, and inadequate coping strategies. Tiwari writes, "Loneliness has now become an important public health concern. It leads to pain, injury/loss, grief, fear, fatigue, and exhaustion. Thus, it also makes a person sick and interferes in day to day functioning and hampers recovery.... Loneliness with its epidemiology, phenomenology, etiology, diagnostic criteria, adverse effects, and management should be considered a disease and should find its place in classification of psychiatric disorders." What do you think? Is loneliness a disease, needing to be listed in the DSM?

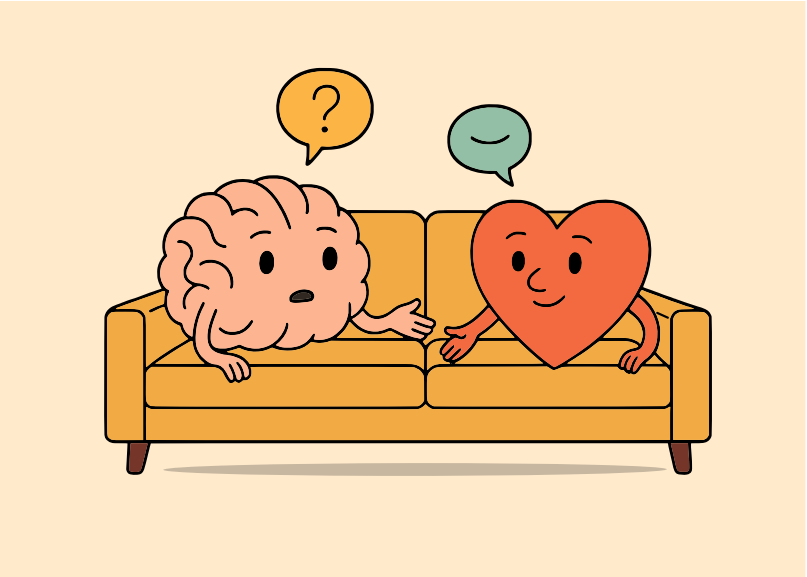
"Loneliness kills." These were the opening words of a March 18, 2015 Time article describing alarming research which shows that loneliness increases the risk of death. How so? According to the meta-analysis of 70 studies published from 1980 to 2014, social isolation increases mortality by 29%, loneliness does so by 26%, and living alone by 32%; but being socially connected leads to higher survival rates (Holt-Lunstad et al., 2015). The authors note, as did Tiwari (2013) earlier, that social isolation and loneliness should be listed as a public health concern as it can lead to poorer health and decreased longevity, as well as CVD (coronary vascular disease; Holt-Lunstad & Smith, 2016). Other ill effects of loneliness include greater stimulated cytokine production due to stress which in turn causes inflammation (Jaremka et al., 2013); greater occurrence of suicidal behavior (Stickley & Koyanagi, 2016); pain, depression, and fatigue (Jarema et al., 2014); and psychotic disorders such as delusional disorders, depressive psychosis, and subjective thought disorder (Badcock et al., 2015).

On a positive note, Stanley, Conwell, Bowen, and Van Orden (2013) found that for older adults who report feeling lonely, owning a pet is one way to feel socially connected. In their study, pet owners were found to be 36% less likely than non-pet owners to report feeling lonely. Those who lived alone and did not own a pet had the greatest odds of reporting loneliness. But the authors offer an admonition – owning a pet, if not managed properly, could actually be deleterious to health. They write, "For example, an older adult may place the well-being of their pet over the safety and health of themselves; they may pay for meals and veterinary services for their pet at the expense of their own meals or healthcare." Bereavement concerns were also raised, though they say that with careful planning, any negative consequences of owning a pet can be mitigated.

Being rejected or ignored by others, called **ostracism**, hurts. No literally. It hurts. Research by Kross, Berman, Mischel, Smith, and Wager (2011) has shown that when rejected, brain areas such as the secondary somatosensory cortex and dorsal posterior insula which are implicated in the experience of physical pain, become active. So not only are the experience of physical pain and social rejection distressing, the authors say that they share a common somatosensory representation too.

So what do you do if you have experienced social rejection? A 2012 article by the American Psychological Association says to seek inclusion elsewhere. Those who have been excluded tend to become more sensitive to opportunities to connect and adjust their behavior as such. They may act more likable, show greater conformity, and comply with the requests of others. Of course, some respond with anger and aggression instead. The article says, "If someone's primary concern is to reassert a sense of control, he or she may become aggressive as a way to force others to pay attention. Sadly, that can create a downward spiral. When people act aggressively, they're even less likely to gain social acceptance." The effects of long-term ostracism can be devastating but non-chronic rejection can be easier to alleviate. Seek out healthy positive connections with both friends and family as a way to combat rejection.

For more on the APA article, see https://www.apa.org/monitor/2012/04/rejection(opens in new window).



3.1.2. Factors on Attraction

On April 7, 2015, Psychology Today published an article entitled, *The Four Types of Attraction*. Referred to as an attraction pyramid, it places status and health at the bottom, emotional in the middle, and logic at the top of the pyramid. *Status* takes on two forms. Internal refers to confidence, your skills, and what you believe or your values. External refers to your job, visual markers, and what you own such as a nice car or house. The article states that confidence may be particularly important and overrides external status in the long run. *Health* can include the way you look, move, smell, and your intelligence. The middle level is *emotional* which includes what makes us unique, trust and comfort, our emotional intelligence, and how mysterious we appear to a potential suitor. And then at the top is *logic* which helps us to be sure this individual is aligned with us in terms of life goals such as having kids, getting married, where we will live, etc. The article says – "With greater alignment, there is greater attraction." Since online romance is trending now, the pyramid flips and we focus on logic, then emotion, and then status and health, but meeting in person is important and should be done as soon as possible. This way, we can be sure there is a physical attraction and can only be validated in person.

To read the article for yourself, visit: https://www.psychologytoday.com/us/blog/valley-girl-brain/201504/the-four-types-attraction(opens in new window)

So how accurate is the article? We will tackle several factors on attraction to include proximity, familiarity, physical attractiveness, similarity, reciprocity, the hard-to-get effect, and intimacy, and then close with a discussion of mate selection.

3.1.2.1. Proximity. First, *proximity* states that the closer two people live to one another, the more likely they are to interact. The more frequent their interaction, the more likely they will like one another then. Is it possible that individuals living in a housing development would strike up friendships while doing chores? This is exactly what Festinger, Schachter, and Back (1950) found in an investigation of 260 married veterans living in a housing project at MIT. Proximity was the primary factor that led to the formation of friendships. For proximity to work, people must be able to engage in face-to-face communication which is possible when they share a communication space and time (Monge & Kirste, 1980) and proximity is a determinant of interpersonal attraction for both sexes (Allgeier and Byrne, 1972). A more recent study of 40 couples from Punjab, Pakistan provides cross-cultural evidence of the importance of proximity as well. The authors write, "The results of qualitative analysis showed that friends who stated that they share same room or same town were shown to have high scores on interpersonal attraction than friends who lived in distant towns and cities" (pg. 145; Batool & Malik, 2010).

3.1.2.2. Mere exposure – A case for familiarity?. In fact, the more we are exposed to novel stimuli, the greater our liking of them will be, called the **mere exposure effect**. Across two studies, Saegert, Swap, & Zajonc (1973) found that the more frequently we are exposed to a stimulus, even if it is negative, the greater our liking of it will be and that this holds true for inanimate objects but also interpersonal attitudes. They conclude, "...the mere repeated exposure of people is a sufficient condition for enhancement of attraction, despite differences in favorability of context, and in the absence of any obvious rewards or punishments by these people" (pg. 241).

Peskin and Newell (2004) present an interesting study investigating how familiarity affects attraction. In their first experiment, participants rated the attractiveness, distinctiveness, and familiarity of 84 monochrome photographs of unfamiliar female faces obtained from US high school yearbooks. The ratings were made by three different groups – 31 participants for the attractiveness rating, 37 for the distinctiveness rating, and 30 for the familiarity rating – and no participant participated in more than one of the studies. In all three rating studies, a 7-point scale was used whereby 1 indicated that the face was not attractive, distinctive, or familiar and 7 indicated that it was very attractive, distinctive, or familiar. They found a significant negative correlation between attractiveness and distinctiveness and a significant positive correlation between attractiveness and familiarity scores, consistent with the literature.

In the second experiment, 32 participants were exposed to 16 of the 24 most typical and 16 of the 24 most distinctive faces from experiment one with the other 8 faces serving as controls. The controls were shown once during the judgment phase while the 16 typical and 16 distinctive faces were shown six times for a total of 192 trials. Ratings of attractiveness were given during the judgment phase. Results showed that repeated exposure increased attractiveness ratings overall, and there was no difference between typical and distinctive faces. These results were found to be due to increased exposure and not judgment bias or experimental conditions since the attractiveness ratings of the 16 control faces were compared to the same faces from experiment 1 and no significant difference between the two groups was found.

Overall, Peskin and Newell (2004) state that their findings show that increasing the familiarity of faces by increasing exposure led to increased attractiveness ratings. They add, “We also demonstrated that typical faces were found to be more attractive than distinctive faces although both face types were subjected to similar increases in familiarity” (pg. 156).

3.1.2.3. Physical attractiveness. Second, we choose who we spend time with based on how *attractive* they are. Attractive people are seen as more interesting, happier, smarter, sensitive, and moral and as such are liked more than less attractive people. This is partly due to the **halo effect** or when we hold a favorable attitude to traits that are unrelated. We see beauty as a valuable asset and one that can be exchanged for other things during our social interactions. Between personality, social skills, intelligence, and attractiveness, which characteristic do you think matters most in dating? In a field study randomly pairing subjects at a “Computer Dance” the largest determinant of how much a partner was liked, how much he wanted to date the partner again, and how frequently he asked the partner out, was simply the physical attractiveness of the partner (Walster et al., 1966).

In a more contemporary twist on dating and interpersonal attraction, Luo and Zhang (2009) looked at speed dating. Results showed that the biggest predictor of attraction for both males and females was the physical attractiveness of their partner (reciprocity showed some influence though similarity produced no evidence – both will be discussed shortly so keep it in mind for now).

Is beauty linked to a name though? Garwood et al. (1980) asked 197 college students to choose a beauty queen from six photographs, all equivalent in terms of physical attractiveness. Half of the women in the photographs had a desirable first name while the other half did not. Results showed that girls with a desirable first name received 158 votes while those with an undesirable first name received just 39 votes.

So why beauty? Humans display what is called a **beauty bias**. Struckman-Johnson and Struckman- Johnson (1994) investigated the reaction of 277 male, middle-class, Caucasian college students to a vignette in which they were asked to imagine receiving an uninvited sexual advance from a casual female acquaintance. The vignette displayed different degrees of coercion such as low-touch, moderate-push, high-threat, and very high-weapon. The results showed that men had a more positive reaction to the sexual advance of a female acquaintance who was attractive and who used low or moderate levels of coercion than to an unattractive female.

What about attractiveness in the workplace? Hosoda, Stone-Romero, and Coats (2006) found considerable support for the notion that attractive individuals fare better in employment-related decisions (i.e., hiring and promotions) than unattractive individuals. Although there is a beauty bias, the authors found that its strength has weakened over the past few decades.

3.1.2.4. Similarity. You have likely heard the expressions “Opposites attract” and “Birds of a feather flock together.” The former expression contradicts the latter, and so this leads us to wonder which is it? Research shows that we are most attracted to people who are like us in terms of our religious and political beliefs, values, appearance, educational background, age, and other demographic variables (Warren, 1966). Thus, we tend to choose people who are *similar* to us in attitudes and interests as this leads to a more positive evaluation of them. Their agreement with our choices and beliefs helps to reduce any uncertainty we face regarding social situations and improves our understanding of the situation. You might say their similarity also validates our own values, beliefs, and attitudes as they have arrived at the same conclusions that we have. This occurs with identification with sports teams. Our perceived similarity with the group leads to group-derived self-definition more so than the attractiveness of the group such that, “... a team that is “crude, rude, and unattractive” may be appealing to fans who have the same qualities, but

repulsive to fans who are more “civilized”.” The authors suggest that sports marketers could emphasize the similarities between fans and their teams (Fisher, 1998). Another form of similarity is in terms of physical attractiveness. According to the **matching hypothesis**, we date others who are similar to us in terms of how attractive they are (Feingold, 1988; Huston, 1973; Bersheid et al., 1971; Walster, 1970).

3.1.2.5. Reciprocity. Fourth, we choose people who are likely to engage in a mutual *exchange* with us. We prefer people who make us feel rewarded and appreciated and in the spirit of reciprocation, we need to give something back to them. This exchange continues so long as both parties regard their interactions to be mutually beneficial or the benefits of the exchange outweigh the costs (Homans, 1961; Thibaut & Kelley, 1959). If you were told that a stranger you interacted with liked you, research shows that you would express a greater liking for that person as well (Aronson & Worchel, 1966) and the same goes for reciprocal desire (Greitmeyer, 2010).

3.1.2.6. Playing hard to get. Does playing hard to get make a woman (or man) more desirable than the one who seems eager for an alliance? Results of five experiments said that it does not though a sixth experiment suggests that if the woman is easy for a particular man to get but hard for all other men to get, she would be preferred over a woman who is uniformly hard or easy to get, or is a woman for which the man has no information about. Men gave these selective women all of the assets (i.e. selective, popular, friendly, warm, and easy going) but none of the liabilities (i.e. problems expected in dating) of the uniformly hard to get and easy to get women. The authors state, “It appears that a woman can intensify her desirability if she acquires a reputation for being hard-to-get and then, by her behavior, makes it clear to a selected romantic partner that she is attracted to him” (pg. 120; Walster et al., 1973). Dai, Dong, and Jia (2014) predicted and found that when person B plays hard to get with person A, this will increase A’s wanting of B but simultaneously decrease A’s liking of B, only if A is psychologically committed to pursuing further relations with B. Otherwise, the hard to get strategy will result in decreased wanting and liking.

3.1.2.7. Intimacy. Finally, *intimacy* occurs when we feel close to and trust in, another person. This factor is based on the idea of **self-disclosure** or telling another person about our deepest held secrets, experiences, and beliefs that we do not usually share with others. But this revealing of information comes with the expectation of a mutual self-disclosure from our friend or significant other. We might think that self-disclosure is difficult online but a study of 243 Facebook users shows that we tell our personal secrets on Facebook to those we like and that we feel we can disclose such personal details to people with whom we talk often and come to trust (Sheldon, 2009).

This said, there is a possibility we can overshare, called *overdisclosure*, which may lead to a reduction in our attractiveness. What if you showed up for class a few minutes early and sat next to one of your classmates who proceeded to give you every detail of their weekend of illicit drug use and sexual activity. This would likely make you feel uncomfortable and seek to move to another seat.

3.1.2.8. Mate selection. As you will see in a bit, men and women have vastly different strategies when it comes to selecting a mate. This leads us to ask why and the answer is rooted in evolutionary psychology. Mate selection occurs universally in all human cultures. In a trend seen around the world, Buss (2004) said that since men can father a nearly unlimited number of children they favor signs of fertility in women to include being young, attractive, and healthy. Since they also want to know that the child is their own, they favor women who will be sexually faithful to them.

In contrast, women favor a more selective strategy given the incredible time investment having a child involves and the fact that she can only have a limited number of children during her life. She looks for a man who is financially stable and can provide for her children, typically being an older man. In support of the difference in age of a sexual partner pursued by men and women, Buss (1989) found that men wanted to marry women 2.7 years younger while women preferred men 3.4 years older. Also, this finding emerged cross-culturally.

3.1.3. Types of Relationships

Relationships can take on a few different forms. In what are called **communal relationships,** there is an expectation of mutual responsiveness from each member as it relates to tending to member’s needs while **exchange relationships** involve the expectation of reciprocity in a form of tit-for-tat strategy. This leads to what are called **intimate or romantic relationships** in which you feel a very strong sense of attraction to another person in terms of their personality and physical features. Love is often a central feature of intimate relationships and will be discussed more in a bit.

3.1.3.1. Family. Of course, our first relationships that are formed are with our family members whether it be our mother or father, siblings, grandparents, or other extended family members. Which of these relationships do you think would be considered the most important? If you said the relationship a child has to its mother, you would be correct, and we know more about how this

relationship works than we do of the one that exists between child and father. One strategy some mothers use to punish bad behavior is to withdraw displays of affection to the child until he/she behaves again, called **love withdrawal**. The strategy should be effective, right? Possibly not. A study of 133 first-generation Chinese American mothers who self-reported psychologically controlling parenting of their children, showed subsequent bullying aggressive behaviors by their child in school as reported by preschool teachers. Love withdrawal was compared with another frequently used control mechanism, guilt induction, which was shown to predict less bullying behavior in children six moths later (Yu, Cheah, Hart, & Yang, 2019).

Another important relationship that is established in childhood is the one we form with our siblings. Research has shown that a child's attachment security with mother and father predicts a significant portion of the relationships that are formed with siblings and peers, and that additionally, one's relationship with siblings predicts later relationships with peers (Roskam, Meunier, & Stievenart, 2015).

3.1.3.2. Friendships. Based on our previous discussion of interpersonal attraction, it should not be surprising to learn that we tend to spend time with people who are similar to us, called **homophily**, and those who are more available to use likely due to spatial proximity, called **propinquity** (Echols & Graham, 2013). Friendships are a way for us to self-disclose with the expectation that our friends will do the same, called **reciprocity**. So, if I tell you my deepest, darkest secret, I expect that you will do the same. One way many adolescents self-disclose is on social media sites such as Facebook. Utz (2015) found that positive and entertaining self-disclosures increased feelings of connection especially for updates posted by their friends but that the most intimate conversations took place in private conversations.

Social constructivist models of gender state that gendered attitudes and subsequent behaviors are context-dependent. One such example is masculinity and femininity. Using a sample of cisgender participants from a small liberal arts college in the northeast, Mehta and Dementieva (2016) found that men reported higher levels of femininity when with women than men, and that both men and women reported higher levels of masculinity when with men and not women. The authors state their results support these social constructivist models of gender.

Finally, a study examining the close friendship patterns of transgender individuals considered the role of gender identity and LGBTQ affiliation on the identity of their friends. Using a sample of 495 transgender individuals, Boyer and Galupo (2018) found that the majority of their friendships occurred in a cross-gender identity context. In general, participants had more cisgender (vs. transgender) friends and more sexual minority (i.e. heterosexual) friends. When the participant was LGBT affiliated, they had more transgender, sexual minority, and LGBT affiliated friends than their non-affiliated counterparts. Trans men had more sexual minority and more LGBT affiliated friends while tans women reported more non-affiliated friends.

3.1.3.3. Love/Romantic. On April 7, 2015, Psychology Today published an article entitled, *The Four Types of Attraction*. Referred to as an attraction pyramid, it places status and health at the bottom, emotional in the middle, and logic at the top of the pyramid. *Status* takes on two forms. Internal refers to confidence, your skills, and what you believe or your values. External refers to your job, visual markers, and what you own such as a nice car or house. The article states that confidence may be particularly important and overrides external status in the long run. *Health* can include the way you look, move, smell, and your intelligence. The middle level is *emotional* which includes what makes us unique, trust and comfort, our emotional intelligence, and how mysterious we appear to a potential suitor. And then at the top is *logic* which helps us to be sure this individual is aligned with us in terms of life goals such as having kids, getting married, where we will live, etc. The article says – "With greater alignment, there is greater attraction." Since online romance is trending now, the pyramid flips and we focus on logic, then emotion, and then status and health, but meeting in person is important and should be done as soon as possible. This way, we can be sure there is a physical attraction and can only be validated in person.

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One outcome of this attraction to others, or the need to affiliate/belong, is love. What is love? According to a 2011 article in Psychology Today entitled '*What is Love, and What Isn't It?*' love is a force of nature, is bigger than we are, inherently free, cannot be turned on as a reward or off as a punishment, cannot be bought, cannot be sold, and cares what becomes of us). Adrian Catron writes in an article entitled, "What is Love? A Philosophy of Life" that "the word love is used as an expression of affection towards someone else....and expresses a human virtue that is based on compassion, affection and kindness." He goes on to say that love is a practice and you can practice it for the rest of your life. (https://www.huffpost.com/entry/what-is-love-a-philosophy_b_5697322(opens in new window)). And finally, the Merriam Webster dictionary online defines love as "strong affection for another arising out of kinship or personal ties" and "attraction based on sexual desire: affection and tenderness felt by lovers." (Source: https://www.merriam-webster.com/dictionary/love(opens in new window)).

Robert Sternberg (1986) said love is composed of three main parts (called the **triangular theory of love**): intimacy, commitment,

and passion. First, **intimacy** is the emotional component and involves how much we like, feel close to, and are connected to another person. It grows steadily at first, slows down, and then levels off. Features include holding the person in high regard, sharing personal affect with them, and giving them emotional support in times of need. Second, **commitment** is the cognitive component and occurs when you decide you truly love the person. You decide to make a long-term commitment to them and as you might expect, is almost non-existent when a relationship begins and is the last to develop usually. If a relationship fails, commitment would show a pattern of declining over time and eventually returns to zero. Third, **passion** represents the motivational component of love and is the first of the three to develop. It involves attraction, romance, and sex and if a relationship ends, passion can fall to negative levels as the person copes with the loss.

This results in eight subtypes of love which explains differences in the types of love we express. For instance, the love we feel for our significant other will be different than the love we feel for a neighbor or coworker, and reflect different aspects of the components of intimacy, commitment, and passion as follows:



Table 3.1. Types of Love (According to Sternberg)

Table 3.1. Types of Love (According to Sternberg)

Type of Love	Intimacy	Commitment	Passion	Example
Nonlove	No	No	No	
Liking	Yes	No	No	Friendships
Infatuation	No	No	Yes	Experiencing love at first sight or being obsessed with a person
Empty	No	Yes	No	Stagnant relationships
Fatuous	No	Yes	Yes	Relationships motivated by passion
Companionate	Yes	Yes	No	Relationships lacking passion such as those between family members or close friends
Romantic	Yes	No	Yes	Being bonded emotionally and physically to another person
Consummate	Yes	Yes	Yes	Complete love

3.1.4. Relationship Conflict

3.1.4.1. Jealousy. The dark side of love is what is called **jealousy**, or a negative emotional state arising due to a perceived threat to one's relationship. Take note of the word perceived here. The threat does not have to be real for jealousy to rear its ugly head and what causes men and women to feel jealous varies. For women, a man's emotional infidelity leads her to fear him

leaving and withdrawing his financial support for her offspring while sexual infidelity is of greater concern to men as he may worry that the children he is supporting are not his own. Jealousy can also arise among siblings who are competing for their parent's attention, among competitive coworkers especially if a highly desired position is needing to be filled, and among friends. From an evolutionary perspective, jealousy is essential as it helps to preserve social bonds and motivates action to keep important relationships stable and safe. But it can also lead to aggression (Dittman, 2005) and mental health issues.

3.1.4.2. The four horsemen of the apocalypse. John Gottman used the metaphor of the Four Horsemen of the Apocalypse from the New Testament to describe communication styles that can predict the end of a relationship. Though not conquest, war, hunger, and death, Gottman instead used the terms criticism, contempt, defensiveness, and stonewalling. Each will be discussed below, as described on Gottman's website: https://www.gottman.com/blog/the-four-horsemen-recognizing-criticism-contempt-defensiveness-and-stonewalling/(opens in new window)

First, *criticism* occurs when a person attacks their partner at their core character "or dismantling their whole being" when criticized. An example might be calling them selfish and saying they never think of you. It differs from a complaint which typically involves a specific issue. For instance, one night in March 2019 my wife was stuck at work until after 8pm. I was upset as she did not call to let me know what was going on and we have an agreement to inform one another about changing work schedules. Criticism can become pervasive and when it does, it leads to the other, far deadlier horsemen. "It makes the victim feel assaulted, rejected, and hurt, and often causes the perpetrator and victim to fall into an escalating pattern where the first horseman reappears with greater and greater frequency and intensity, which eventually leads to contempt."

The second horseman is *contempt* which involves treating others with disrespect, mocking them, ridiculing, being sarcastic, calling names, or mimicking them. The point is to make the target feel despised and worthless. "Most importantly, *contempt is the single greatest predictor of divorce*. It must be eliminated."

Defensiveness is the third horseman and is a response to criticism. When we feel unjustly accused we have a tendency to make excuses and play the innocent victim to get our partner to back off. Does it work though? "Although it is perfectly understandable to defend yourself if you're stressed out and feeling attacked, this approach will not have the desired effect. Defensiveness will only escalate the conflict if the critical spouse does not back down or apologize. This is because defensiveness is really a way of blaming your partner, and it won't allow for healthy conflict management."

Stonewalling is the fourth horseman and occurs when the listener withdraws from the interaction, shuts down, or stops responding to their partner. They may tune out, act busy, engage in distracting behavior, or turn away and stonewalling is a response to contempt. "It is a result of feeling physiologically flooded, and when we stonewall, we may not even be in a physiological state where we can discuss things rationally."

Conflict is an unavoidable reality of relationships. The good news is that each horseman has an antidote to stop it. How so?

- To combat criticism, engage in *gentle start up*. Talk about your feelings using "I" statements and not "you" and express what you need to in a positive way. As the website demonstrates, instead of saying "You always talk about yourself. Why are you always so selfish?" say, "I'm feeling left out of our talk tonight and I need to vent. Can we please talk about my day?"
- To combat contempt, *build a culture of appreciation and respect*. Regularly express appreciation, gratitude, affection, and respect for your partner. The more positive you are, the less likely that contempt will be expressed. Instead of saying, "You forgot to load the dishwasher again? Ugh. You are so incredibly lazy." (Rolls eyes.) say, "I understand that you've been busy lately, but could you please remember to load the dishwasher when I work late? I'd appreciate it."
- To combat defensiveness, *take responsibility*. You can do this for just part of the conflict. A defensive comment might be, "It's not my fault that we're going to be late. It's your fault since you always get dressed at the last second." Instead, say, "I don't like being late, but you're right. We don't always have to leave so early. I can be a little more flexible."
- To combat stonewalling, engage in *physiological self-soothing*. Arguing increase one's heart rate, releases stress hormones, and activates our flight-fight response. By taking a short break, we can calm down and "return to the discussion in a respectful and rational way." Failing to take a break could lead to stonewalling and bottling up emotions, or exploding like a volcano at your partner, or both. "So, when you take a break, it should last at least twenty minutes because it will take that long before your body physiologically calms down. It's crucial that during this time you avoid thoughts of righteous indignation ("I don't have to take this anymore") and innocent victimhood ("Why is he always picking on me?"). Spend your time doing something soothing and distracting, like listening to music, reading, or exercising. It doesn't really matter what you do, as long as it helps you to calm down."

3.1.4.3. Forgiveness. According to the Mayo Clinic, **forgiveness** involves letting go of resentment and any thought we might have about getting revenge on someone for past wrongdoing. So what are the benefits of forgiving others? Our mental health will be better, we will experience less anxiety and stress, we may experience fewer symptoms of depression, our heart will be healthier,

we will feel less hostility, and our relationships overall will be healthier.

It's easy to hold a grudge. Let's face it, whatever the cause, it likely left us feeling angry, confused, and sad. We may even be bitter not only to the person who slighted us but extend this to others who had nothing to do with the situation. We might have trouble focusing on the present as we dwell on the past and feel like life lacks meaning and purpose.

But even if we are the type of person who holds grudges, we can learn to forgive. The Mayo Clinic offers some useful steps to help us get there. First, we should recognize the value of forgiveness. Next, we should determine what needs healing and who we should forgive and for what. Then we should consider joining a support group or talk with a counselor. Fourth, we need to acknowledge our emotions, the harm they do to us, and how they affect our behavior. We then attempt to release them. Fifth, choose to forgive the person who offended us leading to the final step of moving away from seeing ourselves as the victim and "release the control and power the offending person and situation have had in your life."

At times, we still cannot forgive the person. They recommend practicing empathy so that we can see the situation from their perspective, praying, reflecting on instances of when you offended another person and they forgave you, and be aware that forgiveness does not happen all at once but is a process.

Read the article by visiting: www.mayoclinic.org/healthy-lifestyle/adult-health/in-depth/forgiveness/art-20047692



3.1.5. Dissolution

Relationships end from time to time. We do not tend to pair with the first partner we see and stay with him or her forever. What we thought was attraction at first may not have really been. Maybe we were rebounding from a previous relationship. Maybe we were worried about not finding someone and latched on to someone too quickly. Or maybe the relationship, or in this case, the marriage, failed because there was an imbalance in household chores. Really? Could not doing housework end a relationship? It can and that is what Ruppanner, Branden, and Turunen (2017) found in a sample of 1057 Swedish couples. When women reported having to do more housework, they were less likely to be satisfied with their relationship and more likely to consider breaking up or actually dissolve the union. There is a simple solution. The authors state, "...acknowledging partners' housework contributions, in particular women's contributions, has important consequences for relationship quality and stability." Note that this imbalance in housework has a name. Called the **second shift** it reflects the fact that often, women come home from a hard day's work and have to do household chores (Hochschild & Machung, 1989).

3.2. Gender Stereotypes

Section Learning Objectives

- Restate the three components of attitudes.

- Differentiate between stereotypes, prejudice, and discrimination.
- Define and describe stereotype threat.
- Contrast explicit and implicit attitudes.
- Describe the various forms prejudice and discrimination can take.
- Define stigma and list and describe its forms.
- Clarify how social identity theory and social categorization explain prejudice and discrimination.
- Describe how negative group stereotypes and prejudice are socialized.
- Explain whether emotions can predict intolerance.
- Discuss theories explaining the inevitability of intergroup rivalry and conflict over limited resources.
- Clarify how attribution theory explains prejudice and discrimination.
- Define tolerance.
- Describe ways to promote tolerance and improve intergroup relations.
- Describe Allport's intergroup contact theory and state whether it is supported by research.
- Describe the Jigsaw classroom and evidence supporting it.

3.2.1. Attitudes About Other Groups

To distinguish the terms stereotype, discrimination, and prejudice we have to take a step back. The tripartite model is used to examine the structure and function of an attitude. It states that attitudes are composed of three components – affective or emotional, behavioral, and cognitive. Affective indicates our *feelings* about the source of our attitude. Cognitive indicates our *thoughts* about it and behavioral indicates the *actions* we take in relation to the thoughts and feelings we have about the source of the attitude. If we consider our attitude towards puppies, the affective component would manifest by our feeling or outwardly saying that we love puppies. We might base this affection for them on thinking about how they are fluffy or cute (the cognitive component). Finally, our thoughts and feelings produce the behavior of petting them whenever one is near. So how does this relate to the current discussion?

3.2.1.1. Stereotypes. A group **stereotype** is our beliefs about what are the typical traits or characteristics of members of a specific group. Notice the word *beliefs* in the definition. Hence, in terms of our attitude about another group, our stereotype represents the cognitive component.



The group that is the subject of the stereotype may experience what is called **stereotype threat** (Steele & Aronson, 1995) or the social-psychological predicament that arises from widely-known negative stereotypes about one's group. Steele & Aronson (1995) state, "the existence of such a stereotype means that anything one does or any of one's features that conform to it make the stereotype more plausible as a self-characterization in the eyes of others, and perhaps even in one's own eyes" (pg. 797). Consider the stereotypes for feminists or White males. There is a definite stereotype of these groups which may be true of some individuals in the group, and lead to others seeing them that way too. The exact implications of these stereotypes are often negative and could be self-threatening enough to have disruptive effects on the person's life. In one experiment, the authors gave black and white college students a 30-minute test composed of items from the verbal section of the GRE (Graduate Record Exam). In the

stereotype threat condition, the test was described as diagnostic of intellectual ability and in the non-stereotype threat condition it was described as a laboratory problem-solving task that was nondiagnostic of ability. A second nondiagnostic condition was included which told participants to view the difficult test as a challenge. Results showed that black participants performed worse than white participants when the test was framed as a measure of their ability but performed as well as their White counterparts when told that it was not reflective of their ability. Statistical analyses also showed that black participants in the diagnostic condition saw their relative performance as poorer than black participants in the non-diagnostic-only condition. Follow up work found that helping African American students see intelligence as malleable reduced their vulnerability to stereotype threat (Good, Aronson, & Inzlicht, 2003; Aronson, Fried, & Good, 2002).

Schmader (2002) applied a social identity perspective to stereotype threat and hypothesized that when the participant identified highly with the group to which a negative stereotype applies, they be more likely to be inhibited by the performance inhibiting effects of the stereotype. The sample included male and female college students and specifically looked at their gender identity. The results showed that when gender identity was linked to performance on a math test, women with higher levels of gender identification performed worse than men, but for women with lower levels of gender identification, their performance was on par with men. When gender identity was not linked to performance on the math test, there were no gender differences, regardless of the importance either gender placed on gender identity.

One stereotype is that women are not as good as men in mathematics classes such as statistics. This thereby can lead them to avoid taking the class and be underrepresented in many professions, particularly STEM related ones. Kapitanoff and Pandey (2017) proposed that gender of the instructor can play a role too and examined whether a female role model can reduce the negative effects of a gender/mathematics stereotype threat in women as well as improve their academic performance and retention rate. So which types of anxiety might be most relevant to stereotype threat? They found that for women, mathematics anxiety and anxiety about the specific class led to acceptance of the stereotype while for men no significant relationships were found. For women, performance on the first exam was initially lower due to having a female instructor but after some time and additional interaction with her, performance went up on subsequent exams.

3.2.1.2. Prejudice and discrimination. Prejudice occurs when someone holds a negative *feeling* about a group of people, representing the affective component. As noted above, our thoughts and feelings lead to behavior and so **discrimination** is when a person *acts* in a way that is negative against a group of people. What might the effect of such behavior be on the target of the discrimination? According to a 2018 report by the United Nations Department of Economic and Social Affairs, “Discrimination affects people’s opportunities, their well-being, and their sense of agency. Persistent exposure to discrimination can lead individuals to internalize the prejudice or stigma that is directed against them, manifesting in shame, low self-esteem, fear and stress, as well as poor health” (For more on the report, please visit https://www.un.org/development/desa/dspd/2018/02/prejudice-and-discrimination/(opens in new window).)

If you think about these terms for a bit, stereotype and prejudice seem to go together. Taking a step back from the current conversation, think about a political candidate. You likely hold specific thoughts about their policies, how they act, the overall likelihood of success if elected, etc. In conjunction with these thoughts, you also hold certain feelings about them. You might like them, love them, dislike them, or hate them. These thoughts and feelings lead us to behave in a certain way. If we like the candidate, we will vote for him or her. We might also campaign for them or mention them to others in conversation. The point is that the thoughts and feelings generally go together and you really cannot have one without the other. Behavior arises as a result of them. The same would be true of stereotypes and prejudice which go together, and these lead to behavior.

Consider this now. Can a person could be prejudicial and adopt certain stereotypes of other groups, but not discriminate against them? The answer is yes. Most people do not act on prejudices about others due to social norms against such actions. Let’s face it. If you make a snide comment about a fellow employee of another race, gender, sexual orientation, or ethnic group this could lead to disciplinary action up to being fired. Outside of work, comments like that could lead to legal action against you. So even if you hold such beliefs and feelings, you tend to keep them to yourself.

Now is it possible to be discriminatory without being prejudicial? The answer is yes, though this one may not be as obvious. Say an employer needs someone who can lift up to 75lbs on a regular basis. If you cannot do that and are not hired, you were discriminated against but that does not mean that the employer has prejudicial beliefs about you, especially if say you were a woman. The same would be said if a Ph.D. was required for a position and you were refused the job since you only have a Bachelor’s degree. One more example is useful. The online psychology students at Washington State University recently were able to establish a chapter of Psi Chi, the Psychology National Honor Society (done in the spring 2019 for context). Based on national chapter rules, students cannot be accepted unless they have at least 3.3 cumulative and psychology GPAs. So if a student has a 3.1, they would be excluded from the group. This is discrimination but we are not prejudicial against students with a GPA under the cutoff. Given that this is an honor society a certain level of performance is expected. These aforementioned types of behaviors occur every day but are not indicative of a larger problem, usually.

3.2.2. Implicit Attitudes

Section 3.1.1. describes what are called **explicitattitudes**, or attitudes that are obvious and known or at the level of conscious awareness. Is it possible that we might not even be aware we hold such attitudes towards other people? The answer is yes and is called an **implicit attitude**. Most people when asked if they hold a racist attitude would vehemently deny such a truth but research using the Implicit Association Test (IAT) show otherwise (Greenwald et al., 1998). The test occurs in four stages. First, the participant is asked to categorize faces as black or white by pressing the left- or right-hand key. Next, the participant categorizes words as positive or negative in the same way. Third, words and faces are paired and a participant may be asked to press the left-hand key for a black face or positive word and the right-hand key for a white face or negative word. In the fourth and final stage, the task is the same as in Stage 3 but now black and negative are paired and white and good are paired. The test measures how fast people respond to the different pairs and in general the results show that people respond faster when liked faces are paired with positive words and similarly, when disliked faces are paired with negative words. In another study using the IAT, Dasgupta et al. (2000) found that positive attributes were more strongly associated with White rather than Black Americans and the effect held when equally unfamiliar faces were used as stimuli for both racial groups.

Check out the Project Implicit website at – https://implicit.harvard.edu/implicit/(opens in new window)

So do implicit attitudes exist in relation to sexual preference? A study of health care providers (n = 2,338 medical doctors, 5,379 nurses, 8,531 mental health providers, 2,735 other treatment providers, and 214,110 nonproviders in the United States and internationally) found that among heterosexual providers, implicit preferences favored heterosexual people over lesbian and gay, and heterosexual men over women. Heterosexual nurses had the strongest implicit preference for heterosexual men over gay men. For all groups, the explicit preferences for heterosexual versus lesbian or gay people were weaker than implicit preferences. The researchers suggest future research examine the effect that such implicit attitudes have on care (Sabin, Riskind, and Nosek, 2015).

3.2.3. Types of Prejudice and Discrimination

It is not illegal to hold negative thoughts and feelings about others, though it could be considered immoral. What is illegal is when we act on these prejudices and stereotypes and treat others different as a result. Discrimination can take several different forms which we will discuss now. Be advised that though these forms of discrimination can happen in almost any environment, we will focus primarily on the workplace as guidelines exist at the federal level.

3.2.3.1. Racism. According to the U.S. Equal Employment Opportunity Commission (EEOC), "Race discrimination involves treating someone (an applicant or employee) unfavorably because he/she is of a certain race or because of personal characteristics associated with race (such as hair texture, skin color, or certain facial features). Color discrimination involves treating someone unfavorably because of skin color complexion." But race/color discrimination also occurs when we treat someone differently because they are married to a person of a certain race or color. Discrimination on the basis of race can take the form of not hiring, firing, denying or offering lower pay to, skipping for promotion, not training, or laying off a person of another race or color. Harassment on the basis of race/color is said to have occurred if racial slurs are used, offensive or derogatory remarks are made, or racially-offensive symbols are used. The key is that harassment is prevalent when the offensive behavior occurs so frequently, or is so severe, that it creates a hostile environment or in the case of work environments, it leads to an adverse employment decision such as firing or a demotion. How prevalent is race-based discrimination in the workplace? According to EEOC, in 1997 there were 29,199 charges filed with a total of 28,528 in 2017. The highest number of charges filed occurred in 2010 with 35,890. For more on race/color discrimination in the workplace, please visit: https://www.eeoc.gov/laws/types/race_color.cfm(opens in new window).

A few types of racism are worth distinguishing. First, **old-fashioned racism** is the belief that whites are superior to all other racial groups and lead to segregation and some of the forms of discrimination mentioned above. This is contrasted with **modern racism** which only appears when it is safe and socially acceptable to do so. According to Entman (1990) modern racism is composed of three closely intertwined but distinct components. First, is the "anti-black" effect or a general emotional hostility toward blacks. Second, is resistance to the political demands of African Americans. Third, is the belief that racism is dead and that blacks are no longer denied the ability to achieve due to racial discrimination.

Aversive racism occurs when a person denies personal prejudice but has underlying unconscious negative feelings toward another racial group. This could result in uneasiness, discomfort, disgust, and even fear. The person may find a Hispanic person as aversive but at the same time any suggestion that they are prejudiced equally aversive. As Dovidio and Gaertner (2004) wrote, "Thus, aversive racism may involve more positive reactions to whites than to blacks, reflecting a pro-in-group rather than an anti-out-group orientation, thereby avoiding the sigma of overt bigotry and protecting a nonprejudiced self-image" (pg. 4). Another study found that self-reported prejudice was lower in 1998-1999 than it was in 1988-1989. During both time periods, though, white

participants did not engage in discriminatory selection decisions when a candidate's qualifications were clearly weak or strong but did discriminate when the appropriate decision was more ambiguous (Dovidio & Gaertner, 2000).

Finally, **symbolic racism** (Sears & Kinder, 1971) occurs when negative views of another racial group are coupled with values such as individualism. It includes four components measured as such (Sears & Henry, 2005):

1. Denial of continuing discrimination – Agreement with the following statement would indicate symbolic racism – 'Discrimination against blacks is no longer a problem in the United States' while symbolic racism would be evident if you said there has been a lot of real change in the position of black people over the past few years.
2. Work ethic and responsibility for outcomes – If you agree with the following statement symbolic racism would be apparent – 'Its really a matter of some people not trying hard enough; if blacks would only try harder they could just be as well off as whites.'
3. Excessive demands – Consider this question. 'Some say that the Civil Rights people have been trying to push too fast. Others feel that they haven't pushed fast enough. How about you?' If you say push too fast you are displaying symbolic racism.
4. Undeserved advantage – If you disagree with 'Over the last few years, blacks have gotten less than they deserve' but agree with 'Over the past few years, blacks have gotten more economically than they deserve' you are displaying aversive racism.

3.2.3.2. Sexism. Sex discrimination involves treating a person unfavorably due to their sex. EEOC states, "Harassment can include "sexual harassment" or unwelcome sexual advances, requests for sexual favors, and other verbal or physical harassment of a sexual nature. Harassment does not have to be of a sexual nature, however, and can include offensive remarks about a person's sex. For example, it is illegal to harass a woman by making offensive comments about women in general." The victim and the harasser can be either a man or woman, and of the same sex. In 1997, the EEOC had 24,728 charges filed for sex-based discrimination and in 2017 this number was 25,605. The peak charges filed was 30,356 in 2012. For more on sex discrimination in the work place, please visit: https://www.eeoc.gov/laws/types/sex.cfm(opens in new window).



3.2.3.3. Aegism. According to the EEOC, age discrimination occurs when an applicant or employee is treated less favorably due to their age. EEOC writes, "The Age Discrimination in Employment Act (ADEA) forbids age discrimination against people who are age 40 or older. It does not protect workers under the age of 40, although some states have laws that protect younger workers from age discrimination." Interestingly, it is not illegal for an employer to favor an older worker over a younger one, even if both are over the age of 40. In 1997, the EEOC had 15,785 charges filed for age discrimination and in 2017 this number was 18,376. The peak charges filed was 24,582 filed in 2008. For more on age discrimination in the work place, please visit: https://www.eeoc.gov/laws/types/age.cfm(opens in new window).

3.2.3.4. Weight discrimination. Discrimination does occur in relation to a person's weight, or as the Council on Size and Weight Discrimination says, "for people who are heavier than average." They call for equal treatment in the job market and on the job; competent and respectful treatment by health care professionals; the realization that happy, attractive, and capable people come in all sizes; and state that each person has the responsibility to stand up for themselves and others suffering weight discrimination. The group also notes that the media often portrays the obese in a negative light and promotes people's fear of fat and obsession with thinness. Finally, they write, "We stand in solidarity with those who experience discrimination based on

based on ethnicity, skin color, gender, religion, disability, sexual orientation, or other traits. Our mission is to make people aware of discrimination based on size, shape, and weight, and to work to end such discrimination." For more on the council, please visit: http://cswd.org/(opens in new window).

To read about workplace weight discrimination issues, please check out the Time article from August 16, 2017.: http://time.com/4883176/weight-discrimination-workplace-laws/(opens in new window)

3.2.3.5. Disability discrimination. According to EEOC, disability discrimination occurs when an employer or other entity, "treats an applicant or employee less favorably because she has a history of a disability (such as cancer that is controlled or in remission) or because she is believed to have a physical or mental impairment that is not transitory (lasting or expected to last six months or less) and minor (even if she does not have such an impairment)." The law also requires an employer (or in the cases of students, a university) to provide a reasonable accommodation to an employee with a disability, unless it would cause significant difficulty or expense. For more on disability discrimination in the workplace, please visit: www.eeoc.gov/laws/types/disability.cfm.

3.2.3.6. Sexual orientation (LGBT) discrimination. According to the EEOC, sex discrimination is forbidden based on gender identity or sexual orientation Examples include not hiring someone because they are a transgender woman, firing an employee planning to make a gender transition, or denying an employee equal access to a common restroom corresponding to the employee's gender identity. In 2015, EEOC received a total of 1,412 charges that included allegations related to sexual orientation and/or gender identity/transgender status. This was a 28% increase over the total LGBT charges file in 2014. For more on sexual orientation discrimination in the workplace, please visit: https://www.eeoc.gov/eeoc/newsroom/wysk/enforcement_protections_lgbt_workers.cfm(opens in new window)

3.2.4. Stigmatization

Overlapping with prejudice and discrimination in terms of how people from other groups are treated is **stigma**, or when negative stereotyping, labeling, rejection, devaluation, and/or loss of status occur due to membership in a particular social group such as being Hispanic, Homosexual, Jewish, or a Goth; or due to a specific characteristic such as having a mental illness or cancer. Stigma takes on three forms as described below:

- *Public stigma* – When members of a society endorse negative stereotypes of people from another group and discriminate against them. They might avoid them all together resulting in social isolation. An example is when an employer intentionally does not hire a person because their mental illness is discovered.
- *Label avoidance* – In order to avoid being labeled as "crazy" or "nuts" people needing care may avoid seeking it all together or stop care once started. Due to these labels, funding for mental health services or aid to compromised groups could be restricted and instead, physical health services funded.
- *Self-stigma* – When people from another group internalize the negative stereotypes and prejudice, and in turn, discriminate against themselves. They may experience shame, reduced self-esteem, hopelessness, low self-efficacy, and a reduction in coping mechanisms. An obvious consequence of these potential outcomes is the *why try* effect, or the person saying 'Why should I try and get that job. I am not worthy of it' (Corrigan, Larson, & Rusch, 2009; Corrigan, et al., 2016).

Another form of stigma that is worth noting is that of **courtesy stigma** or when stigma affects people associated with the person with a mental disorder, physical disability, or who is overweight or obese. Karnieli-Miller et. al. (2013) found that families of the afflicted were often blamed, rejected, or devalued when others learned that a family member had a serious mental illness (SMI). Due to this they felt hurt and betrayed and an important source of social support during the difficult time had disappeared, resulting in greater levels of stress. To cope, they had decided to conceal their relative's illness and some parents struggled to decide whether it was their place to disclose versus the relative's place. Others fought with the issue of confronting the stigma through attempts at education or to just ignore it due to not having enough energy or desiring to maintain personal boundaries. There was also a need to understand responses of others and to attribute it to a lack of knowledge, experience, and/or media coverage. In some cases, the reappraisal allowed family members to feel compassion for others rather than feeling put down or blamed. The authors concluded that each family "develops its own coping strategies which vary according to its personal experiences, values, and extent of other commitments" and that "coping strategies families employ change over-time."

3.2.5. Social Identity Theory and Social Categorization

Social identity theory asserts that people have a proclivity to categorize their social world into meaningfully simplistic representations of groups of people. These representations are then organized as *prototype*s, or "fuzzy sets of a relatively limited number of category defining features that not only define one category but serve to distinguish it from other categories" (Foddy & Hogg, 1999). This *social categorization* process leads us to emphasize the perceived similarities within our group and the

differences between groups and involves the self. We construct **in-groups**, or groups we identify with, and **out-groups**, or groups that are not our own, and categorize the self as an in-group member. From this, behavior is generated such that the self is assimilated to the salient in-group prototype which defines specific cognitions, affect, and behavior we may exhibit. We favor ingroups, called **ingroup favoritism**, to enhance our own self-esteem and produce a positive self-concept. Another consequence is that we tend to see members of the outgroup as similar to one another while our ingroup is seen as varied, called the **outgroup homogeneity effect** (Park & Rothbart, 1982). One reason why this might occur is that we generally have less involvement with individual members of outgroups and so are less familiar with them. If we have contact, then they are less likely to be seen as homogeneous.

Tajfel et al. (1979) stated that we associate the various social categories with positive or negative value connotations which in turn lead to a positive or negative social identity, based on the evaluations of groups that contribute to our social identity. We also evaluate our group by making a *social comparison* to other groups. They write, "positively discrepant comparisons between in-group and out-group produce high prestige; negatively discrepant comparisons between in-group and out-group result in low prestige" (pg. 60). We desire favorable comparisons between the in-group and some relevant out-groups meaning the in-group is seen as distinct. Our self-esteem can be boosted through our personal achievements or by being associated with successful groups.

3.2.6. Socialization of Negative Group Stereotypes and Prejudice

It should not be a surprise to learn that one way we acquire stereotypes and prejudice is to simply learn them in childhood. Three main, complementary and not competitive, learning models explain how this might occur. In fact, they explain how we acquire and then subsequently maintain such cognitions and emotional reactions to other groups. They could also account for why discriminatory acts are committed.

First, **observational learning** is learning by simply watching others, or you might say we **model** their behavior. Albert Bandura conducted the pivotal research on observational learning in which children were first brought into a room to watch a video of an adult playing nicely or aggressively with a Bobo doll. This was a model. Next, the children are placed in a room with a lot of toys in it. In the room is a highly prized toy but they are told they cannot play with it. All other toys are fine and a Bobo doll is in the room. Children who watched the aggressive model behaved aggressively with the Bobo doll while those who saw the nice model, played nice. Both groups were frustrated when deprived of the coveted toy. In relation to our discussion of stereotypes, prejudice, and discrimination, a child may observe a parent utter racial slurs, make derogatory gestures, or engage in behavior intended to hurt another group. The child can learn to express the same attitudes both in terms of cognitions and affect, and possibly through subsequent actions they make. So the child may express the stereotype of a group and show negative feelings toward that group such as the LGBTQ movement, and then later state a slur at a member of the group or deny them some resource they are legally able to obtain in keeping with discrimination.... And all because they saw their parents or other key figures do the same at some earlier time in life. Keep in mind this all can happen without the parent ever actually ever trying to teach the child such attitudes.

Second, **respondent conditioning** occurs when we link a previously neutral stimulus (NS) with a stimulus that is unlearned or inborn, called an unconditioned stimulus (US). With repeated pairings of NS and US, the organism will come to make a response to the NS and not the US. How so? According to respondent conditioning, learning occurs in three phases: preconditioning, conditioning, and postconditioning. Preconditioning signifies that some learning is already present. There is no need to learn it again. The US yields an unconditioned response (UR). It is un-conditioned meaning it is not (un) learned (conditioned). Conditioning is when learning occurs and in respondent conditioning this is the pairing of the neutral stimulus and unconditioned stimulus which recall yields an UR. Postconditioning, or *after* (post) learning (conditioning) has occurred, establishes a *new* and not naturally occurring relationship of a conditioned stimulus (CS; previously the NS) and conditioned response (CR; the same response). In Pavlov's classic experiments, dogs salivated in response to food (US and UR); no learning was necessary. But Pavlov realized that dogs salivated even before they had the food in front of them. They did so when the heard footsteps coming down or at the sound of a bell (the NS which cause no response initially). With enough pairings, the dogs came to realize that the bell (NS formerly and now a CS) indicated food was coming and salivated (previously the UR and now the CR). How does this relate to learning prejudice and stereotypes? Children may come to associate certain groups (initially a NS) with such things as crime, poverty, and other negative characteristics. Now in respondent conditioning these stimuli were initially neutral like the groups but through socialization children learned these were bad making the relationship of such characteristics as being negative a CS-CR relationship. The new NS is linked to a CS and eventually just thinking of a specific racial group (now a new CS) for example will yield the negative feelings (CR) because we have learned that the group consists of poor criminals who may be dirty or vile for instance.



Third, **operant conditioning** is a type of associative learning which focuses on consequences that follow a response or behavior that we make (anything we do, say, or think/feel) and whether it makes a behavior more or less likely to occur. A **contingency** is when one thing occurs due to another. Think of it as an If-Then statement. If I do X then Y will happen. For operant conditioning this means that if I make a behavior, then a specific consequence will follow. The events (response and consequence) are linked in time. What form do these consequences take? There are two main ways they can present themselves. First, in **reinforcement**, the consequences lead to a behavior/response being more likely to occur in the future. It is strengthened. Second, in **punishment**, a behavior/response is less likely to occur in the future or is weakened, due to the consequences. Operant conditioning says that four contingencies are then possible based on whether something good or bad is given or taken away. Let's go through each and given an example related to the topic of this module.

- **Positive Punishment (PP)** – If something bad or aversive is given or added, then the behavior is less likely to occur in the future. If you talk back to your mother and she slaps your mouth, this is a PP. Your response of talking back led to the consequence of the aversive slap being delivered or given to your face. In relation to our discussion, if you make a demeaning comment about women at work and are reprimanded by being given a demerit or verbally scolded by HR, then you will be less likely to make one again.
- **Positive Reinforcement (PR)** – If something good is given or added, then the behavior is more likely to occur in the future. If you study hard and earn, or are given, an A on your exam, you will be more likely to study hard in the future. Likewise, if you make a negative comment about a lesbian at home and are praised by your parents, then you will be likely to do this again in the future.
- **Negative Reinforcement (NR)** – This is a tough one for students to comprehend because the terms don't seem to go together and are counterintuitive. But it is really simple and you experience NR all the time. This is when something bad or aversive is taken away or subtracted due to your actions, making it that you will be more likely to make the same behavior in the future when some stimuli presents itself. For instance, what do you do if you have a headache? You likely answered take Tylenol. If you do this and the headache goes away, you will take Tylenol in the future when you have a headache. NR can either result in current escape behavior or future avoidance behavior. What does this mean? *Escape* occurs when we are presently experiencing an aversive event and want it to end. We make a behavior and if the aversive event, like the headache, goes away, we will repeat the taking of Tylenol in the future. This future action is an *avoidance* event. We might start to feel a headache coming on and run to take Tylenol right away. By doing so we have removed the possibility of the aversive event occurring and this behavior demonstrates that learning has occurred. In the case of discrimination, if a transgender individual moved into our apartment building, we might engage in hostile behavior to encourage him/her to move. If the person does so, then this is NR and specifically escape behavior. The apartment building (and maybe complex) may get the reputation of not welcoming a diverse range of people and cause future outgroup members to take up residence elsewhere (avoidance behavior).
- **Negative Punishment (NP)** – This is when something good is taken away or subtracted making a behavior less likely in the future. If you are late to class and your professor deducts 5 points from your final grade (the points are something good and the loss is negative), you will likely be on time in all subsequent classes. Back to the work example for NR, we might also be sent home with pay or lose a promotion.

3.2.7. Do Emotions Predict Intolerance?

A 2004 article in the *Monitor on Psychology* notes that though most research points to the fact that intolerance is caused by negative stereotypes, at least in part, research by Susan Fiske of Princeton University indicates that pity, envy, disgust, and pride – all emotions – may play a larger role. Fiske's research team found that the emotions are not only tied to prejudice, but to discriminatory behavior as well. "It's not illegal to have a bad thought or feeling in your head," said Fiske. "What really matters is the behavior." This behavior can include bringing harm to others or excluding them, and through a meta-analysis she conducted of 57 studies done over 50 years on attitude behavior and racial bias, she found that emotions predict behaviors twice as much as negative stereotypes.

Fiske, Cuddy, Glick, and Xu (2002) proposed that the content of stereotypes be studied and argued that stereotypes are captured by the dimensions of warmth and competence. The researchers wrote, "subjectively positive stereotypes on one dimension do not contradict prejudice but often are functionally consistent with unflattering stereotypes on the other dimension" (pg. 878). It is also predicted that status and competition, two variables important for intergroup relations, predict the dimensions of stereotypes such that for subordinate, noncompetitive groups (i.e. the elderly) the positive stereotype of warmth will act jointly with the negative stereotype of low competence to give privileged groups an advantage. They add that for competitive out-groups such as Asians, there is a positive stereotype of competence in conjunction with a negative stereotype of low warmth which justifies the in-group's resentment of them. Finally, they predicted that different combinations of stereotypic warmth and competence bring about unique intergroup emotions, directed toward various societal groups such that "pity targets the warm but not competent subordinates; envy targets the competent but not warm competitors; contempt is reserved for out-groups deemed neither warm nor competent" (pg. 879).

The data provided from nine survey samples show that perceived competence and warmth did indeed differentiate out-group stereotypes; that many out-groups are perceived as competent but not warm (or warm but not competent); that perceived social status predicted perceived competence and perceived competition predicted perceived lack of warmth; and that pity, envy, contempt, and admiration differentiated the four combinations of perceived warmth and competence. In relation to the last finding, the authors speculated, "Both envy items (i.e., envious, jealous) reflect the belief that another possesses some object that the self desires but lacks; this, then, acknowledges the out-groups' possession of good qualities and also that the out-group is responsible for the in-group's distress. In short, envy and jealousy are inherently mixed emotions. Ina similar way, pity and sympathy directed toward warm but incompetent out-groups suggest a mixture of subjectively good feelings and acknowledgement of the out-groups' inferior position. Again, pity is inherently a mixed emotion" (pg. 897). The results of the study fly in the face of the consensus of social psychologists that prejudice involves simultaneous dislike and disrespect for an out-group, but instead, shows that out-group prejudice often focuses on one or the other, but not both.

For more from the Monitor on Psychology article, please visit: https://www.apa.org/monitor/oct04/prejudice(opens in new window)

3.2.8. Is Intergroup Rivalry Inevitable Due to Competition for Limited Resources?

Another line of thinking does assert that groups will engage in prejudicial and discriminatory practices because they are competing for limited resources. The interesting thing is that competition comes about due to either real imbalances of power and resources, called the **realistic group conflict theory** (LeVine & Campbell, 1972) or perceived imbalances, called **relative deprivation**. In the case of the former, groups competing for limited jobs may engage in discriminatory practices or make prejudicial comments about the other group. In the case of the latter, simply believing that your situation is improving but slower than other groups, can lead to instances of intergroup conflict. Using the realistic group conflict theory as a base, Brief et al. (2005) found that the closer whites lived to blacks and the more interethnic conflict they perceived in their communities, the more negative their reaction was to diverse workplaces.

Dominant groups likewise want to maintain the status quo or continue their control over subordinate groups. Those with a **social dominance orientation (SDO)** view their ingroup as dominant and superior to outgroups and seek to enforce the hierarchy as it exists now. They take on roles that enhance or attenuate inequality; are generally intolerant; are not empathetic and altruistic; express less concern for others; are generally more conservative, patriotic, nationalistic, and express cultural elitism; support chauvinist policies; do not support gay rights, women's rights, social welfare programs, ameliorative racial policy, and environmental policy; generally support military programs; support wars for dominance but not war unconditionally; and finally the orientation is more present in males than females (Pratto et al., 1994). The orientation was also found to be distinct from an **authoritarian personality** in which a person displays an exaggerated submission to authority, is intolerant of weakness, endorses the use of punitive measures toward outgroup members or deviants, and conformity to ingroup leaders (Adorno et al., 1950), though Pratto et al. (1994) do indicate that SDO does predict many of the social attitudes conceptually associated with authoritarianism such as ethnocentrism, punitiveness, and conservatism. It is also distinct from social identity theory such that,

"Social identity theory posits out-group denigration as a device for maintaining positive social identity; social dominance theory posits it as a device to maintain superior group status" (pg. 757).

The **system justification theory** proposes that people are motivated to varying degrees, to defend, bolster, and justify existing social, political, and economic arrangements, also known as the status quo, to maintain their advantaged position. These behaviors legitimatize the social hierarchy as it currently exists, even if they hold a disadvantaged place in this system (Jost, 2011). In the case of the disadvantaged, they may assert that the system is fair and just and display outgroup favoritism to those who perform well in the system.

3.2.9. Attribution Theory

Attribution theory (Heider, 1958) asserts that people are motivated to explain their own and other people's behavior by attributing causes of that behavior to either something in themselves or a trait they have, called a **dispositional attribution**, or to something outside the person called a **situational attribution**. We also commit the **fundamental attribution error** (FAE; Jones & Harris, 1967) which is an error in assigning a cause to another's behavior in which we automatically assume a dispositional reason for his or her actions and ignore situational factors. Related to the current discussion of prejudice and discrimination, we commit the cognitive error of **group-serving bias** by ignoring an outgroup member's positive behavior and assigning dispositional attributions to their negative behavior while attributing negative behavior to situational factors and positive behavior to dispositional ones for ingroup members. One study investigated harmful behavior and found evidence of the group-serving bias insofar as members of the Italian Communist party said outgroup actors were more aggressive and intentional in their harmful actions than in-group actors (Schruijer et al., 1994).

Finally, **attributional ambiguity** refers to the confusion a person may experience over whether or not they are being treated prejudicially (Crocker & Major, 1989). Though no one would want to be discriminated against or experience prejudice, knowing this is the cause of negative feedback can actually protect one's self-esteem. Women in one experiment received negative feedback from an evaluator they knew was prejudiced and showed less depression than women who received negative feedback from a nonprejudiced evaluator. In a second experiment, white and black college students were given interpersonal feedback from a white evaluator who could either see them or not. Black participants were more likely to attribute negative feedback to prejudice than positive feedback. Additionally, being seen by the evaluator protected the self-esteem of Black participants from negative feedback but lowered the self-esteem of those who were given positive feedback (Crocker, Voelkl, Testa, & Major, 1991).



3.2.10. Teaching Tolerance

As a starting point, one way to reduce prejudice and discrimination (or reduce negative feelings rooted in cognitions about another group and negative behavior made in relation to the group) is by teaching **tolerance** or "respect, acceptance and appreciation of the rich diversity of our world's cultures, our forms of expression and ways of being human. Tolerance is harmony in difference." The Teaching Tolerance movement (https://www.tolerance.org/(opens in new window)), founded in 1991 by the

Southern Poverty Law Center to prevent the growth of hate, provides free resources to teachers, educators, and administrators from kindergarten to high school. The program centers on social justice, which includes the domains of identity, diversity, justice, and action; and anti-bias, which encourages children and young people to challenge prejudice and be agents of change in their own lives. They write, "We view tolerance as a way of thinking and feeling—but most importantly, of acting—that gives us peace in our individuality, respect for those unlike us, the wisdom to discern humane values and the courage to act upon them."

The group proposes 13 principles to improve intergroup relations. Briefly, they include:

1. Principle 1 – Sources of prejudice and discrimination should be addressed at the institutional and individual levels and where people learn, work, and live. The group notes that power differences, whether real or imagined, have to be dealt with as they are at the heart of intergroup tensions.
2. Principle 2 – We have to go beyond merely raising knowledge and awareness to include efforts to influence the behavior of others. Strategies to improve intergroup relations must also include lessons about how one is to act in accordance with this new knowledge. Also, as prejudice and discrimination are socially influenced to change our own behavior we may need to look to others for support and our efforts may involve change the behavior of those who express such negative views of others and who possibly act on it.
3. Principle 3 – Strategies should include all racial and ethnic groups involved as "diversity provides an opportunity for learning and for comparison that can help avoid oversimplification or stereotyping."
4. Principle 4 – There should be cooperative, equal-status roles for persons from different groups. Activities should be cooperative in nature to ensure that people from different backgrounds can all contribute equally to the task.
5. Principle 5 – People in positions of power should participate in, and model, what is being taught in race relations programs as an example to those being taught and to show that the learning activities matter.
6. Principle 6 – Positive intergroup relations should be taught to children at an early age but at the same time, we need to realize that these lessons may not stick even though they do make later lessons easier to teach and learn. The group states, "People cannot be inoculated against prejudice. Given the differences in living conditions of various racial and ethnic groups, as well as the existence of discrimination throughout our society, improving intergroup relations is a challenge that requires ***ongoing work***." The last two words are by far the most important in this principle.
7. Principle 7 – Building off Principle 6, a one-time workshop, course, or learning module is not enough and there needs to be "highly focused activities and efforts to ensure that positive intergroup relations are pursued throughout the organization involved."
8. Principle 8 – Similarities between racial and ethnic groups need to be emphasized as much as differences in social class, gender, and language. Though there are differences between groups, they also have a lot in common. "Making "the other" seem less different, strange, or exotic can encourage positive interactions and avoid stereotyping."
9. Principle 9 – Most Americans of European descent value the concept of the "melting pot" but expect persons of color and immigrants to assimilate into the dominant white culture and resent them if they do not. Others insist that individuals choose a single cultural identity but by doing so communicate a lack of respect for people with bicultural or multicultural identities and discriminate against them. Hence, we must recognize the value of these varied identities as they represent a bridge to improved intergroup relations.
10. Principle 10 – Oftentimes it is myths and misinformation that sustain stereotypes and prejudices. The inaccuracies of these myths must be exposed to undermine the justifications for prejudice.
11. Principle 11 – Those who are to implement learning activities should be properly trained and their commitment firm to increase the effectiveness of the effort.
12. Principle 12 – The exact problems involved in poor intergroup relations within a setting should be diagnosed so that the correct strategies can be used and then follow-up studies of individual and organization change should follow.
13. Principle 13 – The strategies we use to reduce prejudice toward any particular racial or ethnic group may not transfer to other races or groups. "Since most people recognize that racism is inconsistent with democratic values, it is often the case that prejudiced persons have developed what they think are reasonable justifications for prejudices and discriminatory behavior that are specific to particular groups."

The group notes that all 13 principles do not need to be included in every strategy, and some effective strategies and intervention programs incorporate as few as two or three. The principles presented above are meant to provide guidelines for action and are not guaranteed to work. Even the best-designed strategies can be undermined by weak implementation. The principles are also meant to focus research and discussion on what an effective program would look like.

Source: https://www.tolerance.org/professional-development/strategies-for-reducing-racial-and-ethnic-prejudice-essential-principles(opens in new window)

For Your Consideration

So do interventions to reduce prejudice and create an inclusive environment in early childhood work? A systematic review was conducted by Aboud et al. (2012) and provided mixed evidence. Check out the article for yourself:

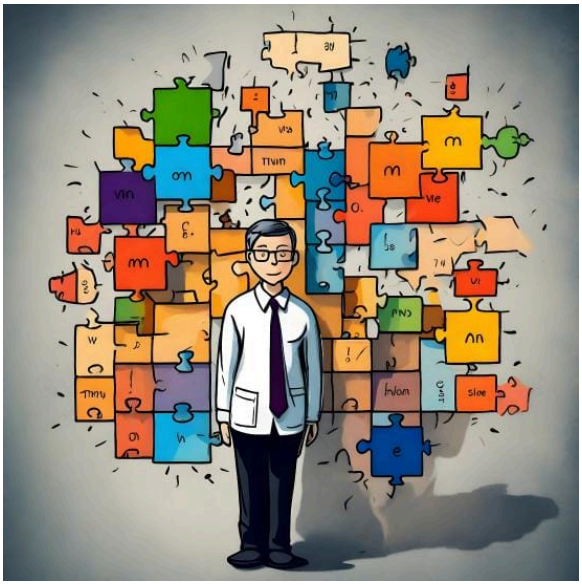
https://www.sciencedirect.com/science/article/pii/S0273229712000214(opens in new window)

3.2.11. Intergroup Contact Theory

According to an APA feature article in 2001, to reduce bias among conflicting groups, all you need is contact (https://www.apa.org/monitor/nov01/contact(opens in new window)). In the 1950s, psychologist Gordon Allport proposed his "**contact hypothesis**" which states that contact between groups can promote acceptance and tolerance but only when four conditions are met. First, there must be equal status between the groups in the situation as if the status quo of imbalance is maintained, the stereotypes fueling prejudice and discrimination cannot be broken down. Second, the groups must share common goals that are superordinate to any one group which leads to the third condition of intergroup cooperation. The groups must work together and share in the fruits of their labor. Finally, there has to be support at the institutional level in terms of authorities, law, or custom (Allport, 1954).

A 2006 meta-analysis by Thomas Pettigrew and Linda Tropp confirm Allport's hypothesis. The researchers synthesized the effects from 696 samples and found that greater intergroup contact is associated with lower levels of prejudice. They also found that intergroup contact effects generalize beyond participants in the immediate contact situation. They write, "Not only do attitudes toward the immediate participants usually become more favorable, but so do attitudes toward the entire outgroup, outgroup members in other situations, and even outgroups not involved in the contact. This result enhances the potential of intergroup contact to be a practical, applied means of improving intergroup relations" (pg. 766).

To read the meta-analysis for yourself, please visit: http://blogs.law.columbia.edu/genderandsexualitylawblog/files/2012/04/A-Meta-Analytic-Test-of-Intergroup-Contact-Theory.pdf(opens in new window)



3.2.12. Jigsaw Classroom

The Jigsaw classroom was created in the early 1970s by Elliot Aronson and his students at the University of Texas and the University of California (Aronson et al., 1978). It has a proven track record of reducing racial conflict and increasing positive educational outcomes. These include reducing absenteeism, increasing a student's liking of school, and improving test performance. Like a jigsaw puzzle, each student represents a piece and is needed to complete and fully understand the final product. So how does it work? According to https://www.jigsaw.org/(opens in new window):

1. The class is divided into smaller groups of 5-6 students, each group diverse in terms of gender, race, ability, and ethnicity.

2. One student is appointed as the group leader and should be the most mature student in the group.
3. The lesson for the day is divided into 5-6 segments. As the website says, if you were presenting a lesson on Eleanor Roosevelt, you would break it up into covering her childhood, life with Franklin and their children, her life after he contracted polio, her work in the White House as First Lady, and her life and work after her husband died.
4. Each student is then assigned to learn one segment ONLY.
5. The students are given time to read over their segment and learn it at least twice. Memorization of the script is not needed.
6. Temporary "expert" groups are next created by having students from each jigsaw group join other students assigned the same segment. The students are given time to discuss the main points with others in the expert group and to rehearse the presentations they will make to their jigsaw group.
7. Students are returned to their jigsaw groups.
8. The students are then asked to present his or her segment to the group and the other group members are encouraged to ask questions for clarification.
9. The teacher is asked to move from group to group and observe the process. If there is a problem in the group such as one member being disruptive or dominating, the teacher will make an intervention appropriate to the situation. With time, the group leader will handle such situations but needs to be trained. The teacher could do this by whispering instructions to the leader.
10. Once the session is over, the teacher gives a quiz on the material. This reinforces that the sessions are not fun and games, but really count.

So does it work? Results show that once a group begins to work well, barriers break down and the students show liking for one another and empathy too (Aronson, 2002). The same results were observed in a study of Vietnamese tertiary students such that they reported appreciating working with others, getting help, and discussing the content with each other (Tran & Lewis, 2012). Outside of reducing intergroup rivalries and prejudice, an adaptation has been shown to help reduce social loafing in college student group projects (Voyles, Bailey, & Durik, 2015).

For more on the jigsaw classroom, please visit: https://www.jigsaw.org/(opens in new window)

3.3. Defining Aggression

Section Learning Objectives

- Define aggression.
- Identify and define the three forms aggression can take.
- Clarify what domestic violence is and its prevalence.
- Clarify what rape is and its prevalence.
- Clarify what sexual harassment is and its prevalence.
- Clarify what bullying and cyberbullying are.

3.3.1. Aggression and Its Types

Aggression can be defined as any behavior, whether physical or verbal, that is carried out with the intent to harm another person. The key here is determining the intention or motive for the aggressive behavior. Aggression should also be distinguished from being **angry** which is an emotional reaction to an event but can just stay that – an emotion. Just because someone is angry does not mean they will necessarily act on it and engage in aggressive behavior. If they do aggress, how intense is the behavior? To understand that, consider that aggressive acts occur along a continuum of least harmful to most harmful. On the extreme side are violent acts or *violence*. The World Health Organization (WHO) defined *violence* in their 2002 *World Report on Violence and Health,* as "The intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation" (pg. 5). They state that violence can be self-directed in the form of suicidal behavior or self-abuse, interpersonal and between family members or individuals who are unrelated, or collective in terms of social, political, and economic and suggest motives for violence. They add that violence acts can be physical, sexual, psychological, or involve deprivation or neglect. For more on the report, and to view the 2014 report on violence prevention, please visit:

https://www.who.int/violence_injury_prevention/violence/world_report/en/(opens in new window)



Aggression has three types. First, **instrumental aggression** occurs when a person attempts to obtain something but does not intend to harm others. The behavior serves as a means to another end. An example would be if a toddler tries to take a toy from another toddler. Second, **hostile** or **physical aggression** occurs when a person intends to harm another person by hitting, shooting, kicking, punching, or stabbing them, or by simply threatening such action. The behavior is an end in itself. Third, **relational aggression** occurs when efforts are made to damage another person's relationships and could include spreading rumors, name calling, ignoring a person, or social exclusion.

3.3.2. Behavioral Manifestations of Aggression

3.3.2.1. Domestic violence. According to the National Coalition Against Domestic Violence (NCADV), *domestic violence* is "the willful intimidation, physical assault, battery, sexual assault, and/or other abusive behavior as part of a systematic pattern of power and control perpetrated by one intimate partner against another." It can include telling the victim they never do right; complete control of finances; embarrassing or shaming the victim with put-downs; telling the victim how to dress; threatening to kill or injure the victim's friends, loved ones, or pets; forcing sex with others; preventing the victim from working or going to school; and destroying the victim's property. They estimate that on average, "nearly 20 people per minute are physically abused by an intimate partner in the United States" and "1 in 4 women and 1 in 9 men experience severe intimate partner physical violence, intimate partner contact sexual violence, and/or intimate partner stalking with impacts such as injury, fearfulness, post-traumatic stress disorder, use of victim services, and contraction of sexually transmitted diseases." Finally, intimate partner violence accounts for 15% of all violent crime.

There is an interesting intersection of age, gender, and marital aggression. Bookwala, Sobin, and Zdaniuk (2005) compared conflict resolution strategies, physical aggression, and injuries in a sample of 6,185 married couples, ranging from young to middle to older aged men and women. Younger participants were found to use more maladaptive conflict resolution strategies, had more physical arguments, and sustained more injuries than older participants. To deal with conflict, women used calm discussions less and heated arguments more, but for the young and middle-aged women, they reported more injuries due to their spouse.

For more on domestic violence, please visit: https://ncadv.org(opens in new window)

3.3.2.2. Rape. According to womenshealth.gov, *rape* occurs when there has been sexual penetration, without consent. The U.S. Department of Justice adds that consent involves clearly stating 'yes' to any type of sexual activity. Rape also occurs if you are drunk, high, drugged, passed out, or asleep as in these situations you cannot give consent. It is a type of sexual assault and during their life, 1 in 5 women and 1 in 71 men will be raped. NCADV adds that "Almost half of female (46.7%) and male (44.9%) victims of rape in the United States were raped by an acquaintance. Of these, 45.4% of female rape victims and 29% of male rape victims were raped by an intimate partner." Violence of a sexual nature culminating in rape starts early with as many as 8.5 million women reporting an incident before the age of 18.

For more information, please visit: https://www.womenshealth.gov/relationships-and-safety/sexual-assault-and-rape/rape(opens in new window)

3.3.2.3. Sexual harassment. *Sexual harassment* occurs when unwelcome sexual advances, requests for sexual favors, or sexually charged words or gestures have been made. In the workplace, the sexual harassment comes with the expectation of submission, whether stated implicitly or explicitly, and as a term of one's employment. It includes unwanted pressure for sexual favors, pressure for dates, sexual comments, cat calls, sexual innuendos or stories, questions about sexual fantasies or fetishes, kissing sounds, howling, hugging, kissing, stroking, sexually suggestive signals, staring at someone, winking, etc. A February 21, 2018 article by NPR (National Public Radio) reported that 81% of women and 43% of men had experienced sexual harassment of some sort during their life.

"The National Intimate Partner and Sexual Violence Survey (NISVS) is an ongoing survey that collects the most current and comprehensive national- and state-level data on intimate partner violence, sexual violence and stalking victimization in the United States." To view the report and other resources yourself, please visit: https://www.cdc.gov/violenceprevention/datasources/nisvs/index.html(opens in new window).

To read the full NPR article, please visit:

https://www.npr.org/sections/thetwo-way/2018/02/21/587671849/a-new-survey-finds-eighty-percent-of-women-have-experienced-sexual-harassment(opens in new window)



3.3.2.4. Bullying and cyberbullying. The Centers for Disease Control and Prevention (CDC), defines *bullying* as "...any unwanted aggressive behavior(s) by another youth or group of youths, who are not siblings or current dating partners, involving an observed or perceived power imbalance. These behaviors are repeated multiple times or are highly likely to be repeated. Bullying may inflict harm or distress on the targeted youth including physical, psychological, social, or educational harm." Stopbullying.gov adds that this behavior can include verbal (teasing, name-calling, taunting, threats of harm, or inappropriate sexual comments), social (spreading rumors or excluding someone intentionally), or physical (spitting on, hitting, kicking, breaking someone's things, or making rude hand gestures) bullying. The BJS reports that during the 2015-2016 school year, 22% of middle schools reported at least one incident of student bullying each week while 15% of high schools, 11% of combined schools, and 8% of primary schools reported incidents.

Cyberbullying involves the use of technology such as social media, e-mail, chatrooms, texting, video games, Youtube, or photographs to humiliate, embarrass, intimidate, or even threaten someone to gain power and control over them. According to the National Bullying Prevention Center, cyberbullying involves an electronic form of contact, an aggressive act, intent, repetition, and harm to the target (Hutson, 2016) and in 2015 the CDC (Centers for Disease Control and Prevention) reported that 15.5% of high school students and 24% of middle school students were cyberbullied. Unlike bullying done outside of the online environment, the target may not know who is actually bullying them or why, the cyberbullying could go viral and to a large audience, parents and adults may have difficulty managing it, and the harmful effects of cyberbullying on the target may not be easily seen by the bully, thereby perpetuating it.

For more on bullying, please visit:

- https://www.cdc.gov/violenceprevention/youthviolence/bullyingresearch/index.html(opens in new window)
- https://www.stopbullying.gov/what-is-bullying/index.html(opens in new window)

For more on cyberbullying, please visit:

- https://www.pacer.org/bullying/resources/cyberbullying/(opens in new window)



3.3.3. Explaining Violence Through a Gender Lens

One explanation for violence is the stress that adhering to gender roles causes, called **gender role stress**. Consider that men experience a great deal of pressure to adhere to masculine norms, of which being aggressive and violence are included. In a study examining the mediating role of male gender role stress for adherence to hegemonic masculinity and being hostile to women, it was found that gender role stress did mediate status and antifeminity norms while being hostile to women was mediated by a toughness norm (Gallagher & Parrott, 2011). Another study found that fearful attachment and gender role stress predicted controlling behaviors in a sample of 143 men court mandated to attend a batter's intervention program (Mahalik et al., 2005).

Another explanation is **gender role conflict (GRC) theory** which asserts that to understand aggression and violence, one has to look beyond mere gender role stress and examine sociopsychological factors that influence a man's conception of masculinity in a patriarchal and sexist society (O'Neil, 1981a, 1981b). Hence, gender role conflict can lead to negative consequences and pressure to conform to social and cultural expectations of masculinity, at times resulting in exaggerated expression and incarceration (Amato, 2012). Well-being can also be affected negatively if a man attempts to subscribe to masculine norms such as power and playboy, though the norm of winning is positively associated with prospective well-being (Kayla et al., 2019). Hence, adherence to traditional masculine norms can have both positive and negative effects on men's health.

Module Recap

This concludes our discussion of relationships, stereotypes, and aggression, which asked you to apply a social psychology lens to the topic of gender. We hope you found it interesting and are ready to continue examining gender through other lenses. Next up, physiological.

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2.2: Module 5 – Gender Through a Developmental Psychology Lens

Module 5: Gender Through a Developmental Psychology Lens

Module Overview

In this module, we will focus on various theories that have attempted to explain gender development. We will begin by taking a look back to the very beginning – psychoanalytic theories. We will then take a very detailed look at various factors that impact gender socialization while also uncovering two common social theories – social learning theory and social cognitive theory. Next, we will learn about Kohlberg's cognitive development theory and how he explained gender development. We will also learn about gender schema theory. Finally, we will end by taking a brief, but important, glance at various biologically-based theories of gender development.

Module Outline

- 5.1. Psychoanalytic Theories
- 5.2. Gender Socialization
- 5.3. Cognitive Theories
- 5.4. Etiological Theories

Module Learning Outcomes

- To become familiar with the basic principles of one of the first theories in psychology, psychoanalysis, and how it relates to gender development.
- To learn about social theories and how socialization of gender occurs.
- To understand cognitive theories of psychology and how they apply to gender.
- To gain a basic understanding of biological factors as they relate to gender in psychology.

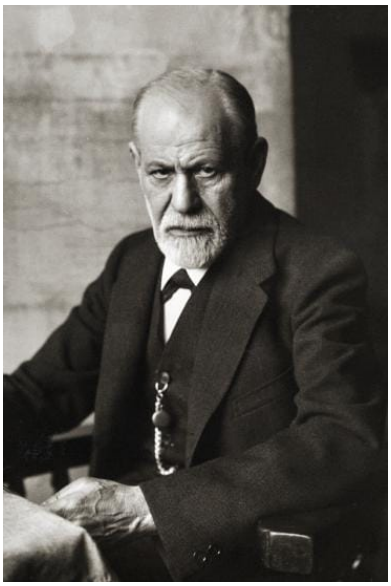
5.1. Psychoanalytic Theories

Section Learning Objectives

- To gain a basic understanding of psychoanalytic theory.
- To increase understanding of how Freud theorized gender and how his theory applies to gender in psychology.
- To increase understanding of how Horney theorized gender and how her theory applies to gender in psychology.
- To understand potential strengths as well as weaknesses and criticisms of these theories.

You may remember learning about psychoanalytic theory in your Introduction to Psychology class. If not, no worries, we are about to have a crash course to catch you up! Psychoanalysis was one of the very first theories in psychology, and we have Sigmund Freud to thank for that. Sigmund Freud is often considered the father of psychology. For the purposes of this class, we are going to focus on how his theory specifically relates to gender development. But to allow for that, let's be sure we have some important foundational knowledge of psychoanalytic theory, in general. Overall, psychoanalytic theory focuses on very early life experiences. Essentially, it was theorized that one's psyche is impacted significantly by major and minor events, even in infancy. This later impacts one's functioning as an adult, and is the cause of psychopathology that may be seen. Ultimately, Freud theorized that an individual's psychosomatic distress (physical symptoms that occur due to psychological distress) distress was a manifestation of internal conflicts. Moreover, the internal conflict was often considered to occur in the subconscious, meaning one did not realize events had occurred and/or were impacting one's current functioning. As such, the idea was that one must uncover these subconscious events through talk therapy. Freud and other psychoanalysts believed this was the only way to resolve the internal conflict in the subconscious, and to then alleviate the physical and psychological maladjustment that was presenting in the

individual.



5.1.1. Sigmund Freud's Psychosexual Theory

One thing that is not commonly mentioned about Freud is that he was one of the first theorists to really focus in on the fact that the two sexes may actually develop differently, meaning he was one of the first to focus on gender differences. However, he did assume that the male experience was the "norm" of development, which is evident in his theory and concepts. However, to his credit, he recognized that biology did not necessarily equal gender. As you have probably learned in many other courses, his theory comes under heavy criticism and is riddled with biases. However, there are some concepts that seem to have endured, including the concept of internal conflicts and how the unconscious motivates us, to some degree.

Despite a few enduring concepts, there are other pieces of his theory that are, as I mentioned, heavily criticized. For example, his theory assumes that healthy and mature development results in heterosexuality with very strict conformity to one's prescribed gender. In fact, his theory would suggest that someone that is not heterosexual experienced a fixation in one of his stages (described below) and thus did not resolve a primary conflict. As such, one would need to attempt to be "cured" of homosexuality. He also suggested that, although biology does not predict gender development, gender development is always related to sexuality.

If you remember from your Introduction to Psychology course, Freud's theory is well known for coining the constructs of id, ego, and superego and for centering much of his theory around the libido (or sex drive). For the crash-coursers here, the *id* can be thought of as our primal instincts – sex and aggression, the *ego* can be thought of as our logical thinking brain area – rational, practical thinking, and the *superego* can be thought of as our moral compass – the mediator between the id and ego. Ultimately, Freud indicated that the libido (sex drive, part of the *id*) was the driving factor that moved individuals through development, and the location of this libido moved throughout development. "The libido moved?", you ask. Yes. In the beginning, the libido is centered in the oral area, known as the Oral Stage. An individual gets pleasure from feeding, swallowing, sucking, etc. If a child develops appropriately in this stage, they learn that they are loved by their mother, and their ego begins to develop, to deal with frustration from going from being breastfed to eating solid foods. If they do not resolve this stage appropriately, they may later have issues with over eating, smoking, etc. In each stage, there is a goal to resolve a conflict successfully. If the individual resolves the conflict, the child develops adaptively. According to Freud, if the individual does not resolve the conflict successfully, there are negative consequences to development. Below is a list of the stages pulled directly from https://www.simplypsychology.org/psychosexual.html (opens in new window) [www.simplypsychology.org] (Table 8.1). In this class, we will focus on the Phallic Stage, as this is the area in which the Oedipus complex emerges and most directly relates to gender development from Freud's theory.

Table 8.1 *Freudian Stages Directly Sourced*

https://www.simplypsychology.org/psychosexual.html [www.simplypsychology.org]

Freudian Stages

Stage & Age	Source of Libido & Pleasure	Important Influences	Consequences of Fixation
Oral 0-1	The mouth. The child enjoys feeding, sucking, swallowing, putting things in mouth etc.	The child equates its mother and feeding with love, so deprivation or forceful feeding can lead to later problems. In the latter half of this stage, the child is weaned onto solid food and starts having to wait to be fed. This causes frustration and aggression. In order to deal with these, the child develops an ego, and starts to differentiate itself from the people around it (especially the mother).	Smoking, chewing pens & fingernails etc. Overeating & drinking. Sarcasm and verbal hostility.
Anal 1-3	The anus. The child derives pleasure from expelling or withholding feces.	Toilet training. The child is expected to expel feces only at the appropriate times and locations. It realizes that its parents' approval/love depends on this, the first sign that love is not unconditional. However, it also realizes that it can control its parents by controlling its bowel movements. Toilet training that is too harsh or too lax can lead to problems.	Anal-retentive: obsessive tidiness, neatness, intolerance, meanness and passive aggression. Anal expulsive: sloppiness, disorganization, untidiness, defiance, recklessness and excessive generosity.
Phallic 3-5	The penis or clitoris. The child derives pleasure from masturbation.	At this point, girls and boys diverge as the Oedipus complex begins (see below). If the Oedipus complex is successfully negotiated, then the child develops a superego by incorporating the morals and values of their same-sex parent.	Men: feelings of anxiety and guilt about sex, fear of castration, possible vanity, self-obsession and narcissism. Women: feelings of inferiority and envy.
Latent 5-Puberty	Sexual drives are repressed.	During this stage the child represses all of what has happened previously. It focuses on adjusting to its environment and acquiring the knowledge and skills it will need as an adult.	Fixation does not happen in this stage.
Genital Puberty-Death	The genitals. The adult derives pleasure from masturbation and sexual intercourse.	At puberty, the sexual drives from the id are re-awoken, and the remainder of adult life is dedicated to the pursuit of sex and sexual relationships.	Fixation at this stage is what should happen, and indicates a well-adjusted adult.

Oedipus complex. Ultimately, until the Phallic stage, Freud viewed development to be the same for both boys and girls. The penis, or absence of, is the differentiating factor here, as the libido moves to the penis or clitoris in the Phallic stage. He viewed this stage as the time in which 'boys become men'.

So why did Freud describe the conflict in the Phallic stage as the Oedipus complex? Well, let's take a very brief look at Oedipus himself. Oedipus was a man that killed his father and married his mother in Greek mythology. As this isn't a lesson in Greek mythology, we will keep the story extremely brief. Oedipus had an early life that separated him from his true mother and father. He later ended up killing his father in battle (not knowing it was his father). Events occurred and ultimately, he married. However, he nor his wife knew that his new bride was actually his mother. When this was learned, his mother/wife hung herself and Oedipus poked both of his eyes out, blinding him (McLeod, 2008).

So, what does this have to do with Freud's stages and theory? Great question! In the Phallic stage, the penis (or absence thereof) is the focus of the libido, and thus, will be the focus of the conflict that must be resolved in that stage. Ultimately, in this stage, boys begin to develop sexual desires for their mother and become jealous of their father. This desire then leads to a strong fear that his father will ultimately castrate him due to his attraction, which is known as *castration anxiety*. As always, there is a conflict in Freud's stage, and here it is. To help manage this conflict, the superego develops and the boy transfers his desire for his mother onto other women, in general. Thus, the stage is resolved (McLeod, 2008; Sammons, n.d.).

If you want to read more about a case that Freud worked on that directly deals with and outlines the Oedipus complex, www.simplypsychology.org/little-hans.html(opens in new window) has a nice summary of the story of Little Hans.

So how does this work for girls if they do not have a penis to fear castration of? Excellent question. Sometimes referred to as the Electra Complex, Freud theorized that girls were upset and distressed that they had no penis (referred to as *penis envy*) and resented their mother for this. He theorized that girls begin desiring their father at this time and become jealous of their mother. Similar to boys, the development of the superego allows the girl to resolve this conflict. Ultimately, she begins to accept that she cannot gain a penis, nor have her father, and she transfers this desire onto other men and later transfers her desire for a penis to a desire for a baby (and maybe even more so, a baby boy; Sammons, n.d.).

The following link provides a nice summary of how the two genders move through the Phallic Stage: www.simplypsychology.org/psychosexual.html(opens in new window) Overall, for both genders, *identification* is the ultimate resolution of the internal conflict in the Phallic stage. This results in the individual identifying with the same-sex parent, and adopting that parent's behaviors, roles, etc. (McLeod, 2008).

Following the Phallic stage is the Latency stage, in which Freud indicated that no real psychosexual development is occurring, rather impulses are repressed. However, in the Genital stage, Freud theorized that this is a time in which adolescents experiment sexually, and begin to settle into romantic relationships. Freud theorized that healthy development leads to sexual drive being released through heterosexual intercourse; however, fixations or incomplete resolutions of conflict in this stage may lead to sexual atypicalities (e.g., preference for oral sex rather than intercourse, homosexual relations, etc.; McLeod, 2008). Again, you can see, very clearly, that there is an underlying assumption that healthy development equals heterosexuality, which is a major criticism of Freud's theory (Sammons, n.d.).



5.1.2. Karen Horney

Horney developed a Neo-Freudian theory of personality that recognized some points of Freud's theory as acceptable, but also criticized his theory as being overly bias toward the male. There is truth in this if you think about Freud's theory. Ultimately, to really develop fully, one must have a penis – according to Freud's theory. A female can never "fully" resolve penis envy, and thus, she is never fully able to resolve the conflict. As such, according to Freud's theory, if taken literally, a female can never fully resolve the core conflict of the Phallic Stage and will always have some fixation and thus, some maladaptive development. Horney disputed this (Harris, 2016). In fact, she went as far as to counter Freud's penis envy with womb envy (a man envying a woman's ability to have children). She theorized that men looked to compensate for their lack of ability to carry a child by succeeding in other areas of life (Psychodynamic and neo-freudian theories, n.d.)

The center of Horney's theory is that individuals need a safe and nurturing environment. If they are provided such, they will develop appropriately. However, if they are not, and experience an unsafe environment, or lack of love and caring, they will experience maladaptive development which will result in anxiety (Harris, 2016). An environment that is unsafe and results in abuse, neglect, stressful family dynamics, etc. is termed by Horney as *basic evil*. As mentioned, these types of experiences (basic evil) lead to maladaptive development which was theorized to occur because the individual began to believe that, if their parent did not love them then no one could love them. The pain that was produced from basic evil then led to *basic hostility*. Basic hostility was defined as the individual's anger at their parents while experiencing high frustration that they must still rely on them and were dependent on them (Harris, 2016).

This basic evil and basic hostility ultimately led to anxiety. Anxiety resulted in an individual developing interpersonal strategies of defense (ways a person relates to others). These strategies are considered to fall in three categories (informed by Harris, 2016):

Table 8.2: Interpersonal Strategies

Interpersonal Strategies

Interpersonal Strategy	Key Direction	Actions the Person Takes	How This Presents in Their Personalities
Compliant Solution	Toward	The individual moves toward people. They seek out another person's attention.	This is the people pleaser and dependent person. The person that avoids failure and always takes the "safe" option.

Interpersonal Strategy	Key Direction	Actions the Person Takes	How This Presents in Their Personalities
Detachment Solution	Away	These individuals move away from others and attempt to protect themselves by eluding connection and contact with others.	These individuals want independence and struggle with commitment. They often try to hide flaws
Expansive Solution	Against	These individuals move against others. They seek interaction with others, not to connect with them, rather to gain something from them. They seek power and admiration from others, as well as being seen as highly attention seeking.	This category is further split into three types of individuals: 1. The Narcissist. 2. The Perfectionist. 3. The Arrogant-Vindictive person.

Although Horney disputed much of Freud's male biased theories, she recognized that females are born into a society dominated by males. As such, she recognized that females may be limited due to this, which then leads to developing a *masculinity complex*. This is the feeling of inferiority due to one's sex. She noted that one's family can strongly influence one's development (or lack thereof) of this complex. She described that if a female was disappointed by males in her family (such as their father or brother, etc.), or if they were overly threatened by females in their family (especially their mothers), they may actually develop contempt for their own gender. She also indicated that if females perceived that they had lost the love of their father to another woman (often to the mother) then the individual may become more insecure. This insecurity then would lead to either (1) withdrawal from competing or (2) becoming more competitive (Harris, 2016). The need for the male attention was referred to overvaluation of love (Harris, 2016).



5.2. Gender Socialization

Section Learning Objectives

- To gain a basic understanding of the theory of socialization
- To increase understanding of how gender is socialized
- To increase understanding of how socialization theories regarding gender.
- To understand potential strengths as well as weaknesses and criticisms of these theories.

It's clear that even very early theories of gender development recognized the importance of environmental or familial influence, at least to some degree. As theories have expanded, it has become clearer that socialization of gender occurs. However, each theory has a slightly different perspective on how that may occur. We will discuss a few of those in brief detail, but will focus more on major concepts and generally accepted processes.

Before we get started, I want you to ask yourself a few questions – When do we begin to recognize and label ourselves as boy or girl, and why? Do you think it happens very young? Is it the same across countries? Let's answer some of those questions.

Theories that suggest that gender identity development is universal across countries and cultures (e.g., Eastern versus Western cultures, etc.) have been scrutinized. Critics suggest that, although biology may play some role in gender identity development, the environmental and social factors are perhaps more powerful in most developmental areas, and gender identity development is no different. It is the same "nature versus nurture" debate that falls on the common response of both nature and nurture playing important roles and to ignore one is a misunderstanding of the developmental process (Magnusson & Marecek, 2012). In this section, we are going to focus on the social, environmental, and cultural aspects of gender identity development



5.2.1. Early Life

Infants do not prefer gendered toys (Bussey, 2014). However, by age 2, they show preferences. (Servin, Bhlin, & Berlin, 1999). Did you know that infants can differentiate between male and female faces and voices in their first year of life (typically between 6-12 months of age; Fagan, 1976; Miller, 1983)? Not only that, they can pair male and female voices with male and female faces (known as intermodal gender knowledge; Poulin-Dubois, Serbin, Kenyon, & Derbyshire, 1994). Think about that for a moment – infants are recognizing and matching gender before they can ever talk! Further, 18-month old babies associated bears, hammers, and trees with males. By age 2, children use words like "boy" and "girl" correctly (Leinbach & Fagot, 1986) and can accurately point to a male or female when hearing a gender label given. It appears that children first learn to label others' gender, then their own. The next step is learning that there are shared qualities and behaviors for each gender (Bussey, 2014).

By a child's second year of life, children begin to display knowledge of gender stereotypes. Research has found this to be true in preverbal children (Fagot, 1974), which is really incredible, if you think about it. After an infant has been shown a gendered item (doll versus a truck) they will then stare at a photograph of the "matching gender" longer. So, if shown a doll, they will then look at a photograph of a girl, rather than a boy, for longer (when shown photographs of both a boy and girl side by side). This is specifically true for girls as young as 18-24 months; however, boys do not show this quite as early (Serbin,Poulin-Dubois, Colburne, Sen, & Eichstedt, 2001). Although interpretations and adherence to gender stereotypes is very rigid, initially, as children get older, they learn more about stereotypes and that gender stereotypes are flexible and varied. We actually notice a curved pattern in how rigid children are to stereotyped gender behaviors and expectations (Bussey, 2014). Initially, children are very rigid in stereotypes and stereotyped play. As they reach middle childhood, they become more flexible. However, in adolescents, they become more rigid again. And, generally, boys are more rigid and girls are more flexible with gender stereotypes, comparatively (Blakemore et al., 2009).

There are many factors that may lead to the patterns we see in gender socialization. Let's look at a few of those factors and influencers.



5.2.2. Parents

Parents begin to socialize children to gender long before they can label their own. Think about the first moment someone says they are pregnant. One of the first questions is "How far along are you?" and then "Are you going to find out the sex of the baby?" We begin to socialize children to gender before they are even born! We pick out boy and girl names, we choose particular colors for nurseries, types of clothing, and decor, all based on a child's gender, often before they are ever born (Bussey, 2014). The infant is born into a gendered world! We don't really give infants a chance to develop their own preferences – parents and the caregivers in their life do that for them, immediately. Parents even respond to a child differently, based on their gender. For example, in a study in which adults observed an infant that was crying, adults described the infant to be scared or afraid when they were told the infant was a girl. However, they described the baby as angry or irritable when told the infant was a boy. Moreover, parents tend to reinforce independence in boys, but dependence in girls. They also overestimate their sons' abilities and underestimate their daughters' abilities. Research has also revealed that prosocial behaviors are encouraged more in girls, than boys (Garcia & Guzman, 2017).

Parents label gender even when not required. When observing a parent reading a book to their child, Gelman, Taylor, & Nguyen (2004) noted that parents used generic expressions that generalized one outcome/trait to all individuals of a gender, during the story. For example, "Most girls don't like trucks." Essentially, parents provided extra commentary in the story, and that commentary tended to include vast generalizations about gender. Initially, mothers engaged in this behavior more than the children did; however, as children aged, children began displaying this behavior more than their mothers did. Essentially, mothers modeled this behavior, and children later began to enact the same behavior. Further, as children got older, mothers then affirmed children's gender generalization statements when made.

Boys are more gender-typed and fathers place more focus on this (Bvunzawabaya, 2017). As children develop, parents tend to also continue gender-norm expectations. For example, boys are encouraged to play outside (cars, sports, balls) and build (Legos, blocks), etc. and girls are encouraged to play in ways that develop housekeeping skills (dolls, kitchen sets; Bussey, 2014). What parents talk to their children about is different based on gender as well. For example, they may talk to daughters more about emotions and have more empathic conversations, whereas they may have more knowledge and science-based conversations with boys (Bussey, 2014).

Parental expectations can have significant impacts on a child's own beliefs and outcomes including psychological adjustment, educational achievement, and financial success (Bvunzawabaya, 2017). When parents approach more gender-equal or neutral interactions, research shows positive outcomes (Bussey, 2014). For example, girls did better academically if their parents took this approach versus very gender-traditional families.

5.2.3. Peers

Peers are strong influences regarding gender and how children play. As children get older, peers become increasingly influential. In early childhood, peers are pretty direct about guiding gender-typical behaviors. As children get older, their corrective feedback becomes subtler. So how do peers socialize gender? Well, non-conforming gender behavior (e.g., boys playing with dolls, girls playing with trucks) is often ridiculed by peers and children may even be actively excluded. This then influences the child to conform more to gender-traditional expectations (e.g., boy stops playing with a doll and picks up the truck).

We begin to see boys and girls segregate in their play, based on gender, in very early years. Children tend to play in sex-segregated peer groups. We notice that girls prefer to play in pairs while boys prefer larger group play. Boys also tend to use more threats and physical force whereas girls do not prefer this type of play. Thus, there are natural reasons to not intertwine and to instead segregate (Bussey, 2014). The more a child plays with same-gender peers, the more their behavior becomes gender-stereotyped. By age 3, peers will reinforce one another for engaging in what is considered to be gender-typed or gender-expected play. Likewise, they will criticize, and perhaps even reject a peer, when a peer engages in play that is inconsistent with gender expectations. Moreover, boys tend to be very unforgiving and intolerant of nonconforming gender play (Fagot, 1984).

5.2.4. Media and Advertising

Media includes movies, television, cartoons, commercials, and print media (e.g., newspapers, magazines). In general, media tends to portray males as more direct, assertive, muscular, in authority roles, and employed, whereas women tend to be portrayed as dependent, emotional, low in status, in the home rather than employed, and their appearance is often a focus. Even Disney movies tend to portray stereotyped roles for gender, often having a female in distress that needs to be saved by a male hero; although Disney has made some attempts to show women as more independent and assertive in more characters. We have seen a slight shift in this in many media forms, although it is still very prevalent, that began to occur in the mid to late 1980s and 1990s (Stever, 2017; Torino, 2017). This is important, because we know that the more children watch TV, the more gender stereotypical beliefs they have (Durkin & Nugent, 1998; Kimball 1986).

Moreover, when considering print media, we know that there tends to be a focus on appearance, body image, and relationships for teenage girls, whereas print media tends to focus on occupations and hobbies for boys. Even video games have gender stereotyped focuses. Females in videogames tend to be sexualized and males are portrayed as aggressive (Stever, 2017; Torino, 2017).

5.2.5. School Influences

Research tends to indicate that teachers place a heavier focus, in general, on males – this means they not only get more praise, they also receive more correction and criticism (Simpson & Erickson, 1983). Teachers also tend to praise boys and girls for different behaviors. For example, boys are praised more for their educational successes (e.g., grades, skill acquisition) whereas girls are acknowledged for more domesticate-related qualities such as having a tidy work area (Eccles, 1987). Overall, teachers place less emphasis on girls' academic accomplishments and focus more on their cooperation, cleanliness, obedience, and quiet/passive play. Boys, however, are encouraged to be more active, and there is certainly more of a focus on academic achievements (Torino, 2017).

The focus teachers and educators have on different qualities may have a lasting impact on children. For example, in adolescence, boys tend to be more career focused whereas girls are focused on relationships (again, this aligns with the emphasis we see placed by educators on children based on their gender). Girls may also be oriented toward relationships and their appearance rather than careers and academic goals, if they are very closely identifying with traditional gender roles. They are more likely to avoid STEM-focused classes, whereas boys seek out STEM classes (more frequently than girls). This may then impact major choices if girls go to college, as they may not have experiences in STEM to foster STEM related majors (Torino, 2017). As such, the focus educators place on children can have lasting impacts. Although we are focusing on the negative, think about what could happen if we saw a shift in that focus!

Okay, so we talked above about how children are socialized to gender – but how? Well there are a few areas we should discuss. We will cover social theories, cognitive theories, social cognitive theories, and biological theories.

5.2.6. Social Theories

5.2.6.1. Social learning theory. Do you remember Albert Bandura from Introduction to Psychology? He's the guy that had children watch others act aggressively toward a doll (the BoBo doll), and then observed children's behaviors with the same doll. Children that watched aggressive acts then engaged in aggression with the doll. Essentially, a behavior was modeled, and then they displayed the behavior. Here is a link to a video with Albert Bandura and footage from his experiment: https://www.youtube.com/watch?v=dmBqwWlJg8U (opens in new window). Let's think about this in a current-life example. You walk into a gym for the first time. It is full of equipment you aren't sure how to use. What do you do if you want to know how to use it (let's assume the nice little instructions with pictures are not posted on the equipment)? The most likely thing, if there is no trainer/employee around to ask, is to watch what someone does on the machine. You watch what how they set it up, what they do, etc. You then go to the equipment and do the same exact thing! This is modeling. You modeled the behavior the person ahead of you did. The same thing can happen with gender – modeling applies to gender socialization.

We receive much of our information about gender from models in our environment (think about all the factors we just learned about – parents, media, school, peers). If a little girl is playing with a truck and looks over and sees three girls playing with dolls, she may put the truck down and play with the dolls. If a boy sees his dad always doing lawn work, he may too try to mimic this, in the immediacy. Here is the interesting part: modeling does just stop after the immediate moment is over. The more we see it, the more it becomes a part of our socialization. We begin to learn rules of how we are to act and what behavior is accepted and desired by others, what is not, etc. Then we engage in those behaviors. We then become models for others as well! Now, some theories question modeling; although, further research has shown that modeling appears to be imperative in development, but the level of specificity or rigidity to gender norms of the behavior being modeled is also important (Perry & Bussey, 1979). Other's incorporate modeling into their theory with some caveats. Kohlberg is one of those theorists, and we will learn about later.

5.2.6.2. Social cognitive theory. Another theory combines the theory of social learning with cognitive theories (we will discuss cognitive theories below). While modeling in social learning explains some things, it does not explain everything. This is because we don't just model behavior, we also monitor how others react to our behaviors. For example, if a little girl is playing with a truck her peers laugh at her, that is feedback that her behavior is not gender-normative and she then may change the behavior she engages in. We also get direct instruction on how to behave as well. Again, girls don't sit with their legs open, boys don't play with dolls, girls don't get muddy and dirty, boys don't cry – you get the point. When peers or adults directly instruct another on what a girl or boy is or is not to do, although not modeling, is a heavily influential socializing factor. To explain this, social cognitive theory posits that one has *enactive experiences* (this is essentially when a person receives reactions to gendered behavior), *direct instruction* (this is when someone is taught knowledge of expected gendered behavior), and *modeling* (this is when others show someone gendered behavior and expectations). This theory posits that these social influences impact children's development of gender understanding and identity (Bussey, 2014). Social cognitive theories of gender development explain and theorize that development is dually influenced by (1) biology and (2) the environment. Moreover, the theory suggests that these things impact and interact with various factors (Bussey & Bandura, 2005). This theory also accounts for the entire lifespan when considering development, which is drastically different than earlier theories, such as psychodynamic theories.

5.3. Cognitive Theories

Section Learning Objectives

- To gain a basic understanding of cognitive theories
- To increase understanding of how Kohlberg theorized gender, and how his theory applies to gender in psychology
- To increase knowledge about gender schema theory

5.3.1. Kohlberg's Cognitive Developmental Theory

Lawrence Kohlberg theorized the first cognitive developmental theory. He theorized that children actively seek out information about their environment. This is important because it places children as an active agent in their socialization. According to cognitive developmental theory, a major component of gender socialization occurs by children recognizing that gender is constant and does not change which is referred to this as "*gender constancy*". Kohlberg indicated that children choose various behaviors that align with their gender and match cultural stereotypes and expectations. Gender constancy includes multiple parts. One must have an ability to label their own identity which is known as *gender identity*. Moreover, an individual must recognize that gender remains constant over time which is *gender stability* and across settings which is *gender consistency*. Gender identity

appears to be established by around age three and gender constancy appears to be established somewhere between the ages of five and seven. Although Kohlberg's theory captures important aspects, it fails to recognize things such as how gender identity regulates gender conduct and how much one adheres to gender roles through their life (Bussey, 2014).

Although Kohlberg indicated that modeling was important and relevant, he posited that it was only relevant once gender constancy is achieved. He theorized that constancy happens first, which then allows for modeling to occur later (although the opposite is considered true in social cognitive theory). The problem with his theory is children begin to recognize gender and model gender behaviors before they have cognitive capacities for gender constancy (remember all that we learned about how infants show gender-based knowledge?!).

5.3.2. Gender Schema Theory

Gender schema theory, although largely a cognitive theory, does incorporate some elements of social learning as well. Schemas are essentially outlines – cognitive templates that we follow, if you will. Thus, a gender schema is an outline about genders – a template to follow regarding gender. The idea is that we use schemas about gender to guide our behaviors and actions. Within this theory, it is assumed that children actively create their schemas about gender by keeping or discarding information obtained through their experiences in their environment (Dinella, 2017).

Interestingly, there are two variations of gender schema theory. Bem created one theory while Martin and Halverson created another. We won't get into too many details about the variations for the purposes of this class (Dinella, 2017).

Overall, it is widely accepted that there are two types of schemas that are relevant in gender schema theory – superordinate schemas and own-sex schemas. Essentially, superordinate schemas guide information for gender groups whereas own-sex schemas guide information about one's own behaviors as it relates to their own gender group (Dinella, 2017).

So why have schemas? Well, it's a cheat sheet that makes things easier and quicker, essentially. Think about it, if you have an outline for a test that told you that the shortest answer is always the right answer, you wouldn't even have to study. Heck, you don't even have to 'read' the question options. You can simply find the choice that has the least amount of words, pick it, and you'll ace the test (wouldn't that be nice?!). So, gender schemas make it easier to make decisions in the moment, regarding gendered behavior. Here is an example. If a child has created a schema that says boys play with trucks, when the boy is handed a truck, he will quickly choose to play with it. However, if the truck is handed to a girl, she may quickly reject it (Dinella, 2017)

So how do children develop schemas? Well, it likely occurs in three different phases. First, children start recognizing their own gender groups and begin to build schemas. Then, a rigid phase occurs in which things are very black or white, (or, girl or boy, if you will). Things can only be one or the other, and there is very little flexibility in schemas. This occurs somewhere between ages five and seven. Lastly, a phase in which children begin to recognize that schemas are flexible and allow for a bit more of a "gray" area occurs (Dinella, 2017).

Let's think of how schemas are used to begin to interpret one's world. Once a child can label gender of themselves, they begin to apply schemas to themselves. So, if a schema is "Only girls cook", then a boy may apply that to themselves and learn he cannot cook. This then guides his behavior. Martin, Eisenbud, and Rose (1995) conducted a study in which they had groups of boy toys, girl toys, and neutral toys. Children used gender schemas and gravitated to gender-normed toys. For example, boys preferred toys that an adult labeled as boy toys. If a toy was attractive (meaning a highly desired toy) but was label for girls, boys would reject the toy. They also used this reasoning to predict what other children would like. For example, if a girl did not like a block, she would indicate "Only boys like blocks" (Berk, 2004; Liben & Bigler, 2002).

5.4 Biological Theories

Section Learning Objectives

- To gain a basic understanding of biological theories
- To increase understanding of how biology may impact gender development through evolution, genetics, epigenetics, and learning.

In regard to biological theories, there tends to be four areas of focus. Before we get into those areas, let's remember that we are talking about *gender* development. That means we are not focusing on the anatomical/biological sex development of an

individual, rather, we are focusing on how biological factors may impact *gender* development and *gendered behavior*. So, back to 'there are four main areas of focus.' The four areas of focus include (1) evolutionary theories, (2) genetic theories, (3) epigenetic theories, and (4) learning theories (don't worry, I'll explain how this is biology related, rather than cognitively or socially related).

5.4.1. Evolution Theories

Within evolution-based theories, there are three schools of thought: sex-based explanations, kinship-based explanations, and socio-cognitive explanations. *Sex-based* explanations explain that gendered behaviors have occurred as a way to adapt and increase the chances of reproduction. Ultimately, gender roles get divided into females focusing on rearing children and gathering food close to home, whereas males go out and hunt and protect the family. To carry out the required tasks, males needed higher androgens/testosterone to allow for higher muscle capacity as well as aggression. Similarly, females need higher levels of estrogen as well as oxytocin, which encourages socialization and bonding (Bevan, 2017). Although this may seem logical at surface level, it does not account for what we see in more egalitarian homes and cultures. This theory does seem to explain everything, doesn't it?

Then, there is *kinship-based* explanations that rationalize that very early on, we lived in groups as a means of protection and survival. As such, the groups that formed tended to be kin and shared similar DNA. Essentially, the groups with the strongest DNA that allowed for the best traits for survival, survived. Further, given that this came down to "survival of the fittest" it made sense to divvy up tasks and important behaviors. Interestingly, this was less based on sex and more on qualities of an individual, essentially using people's strengths to the group's advantage. This theory tends to be more supported, than sex-based theories (Bevan, 2017).

Lastly, *socio-cognitive* explanations explain that we have changed our environment, and that, thus, we have changed in the environment in which natural selection occurs. Essentially, when we use our cognitive abilities to create things, such as tools, we thus change our environment. We are then changing the environment that defined what behaviors/assets were necessary to survive. For example, if we can now use tools to hunt more effectively, the traditional needs of a male (as explained in sex-based theories) may be less critical in this task (Bevan, 2017).



5.4.2. Genetic-based Theories

We can be "genetically predisposed" to many things, mental illness, cancer, heart conditions, etc. It is theorized that we also are predisposed to gendered behavior and identification. This theory is most obvious when individuals are predisposed to a gender that does not align with biological sex, also referred to as transgender. Research has actually revealed that there is some initial evidence that gender involves somewhat of a genetic predisposition. Specifically, twin studies have shown that nonconforming gender traits, or transgender, is linked to genetic gender predispositions. More specifically, when one twin is transgender, it is more likely that the other twin is transgender as well. This phenomenon is not evidenced in fraternal twins or non-twin siblings to the same degree (Bevan, 2017).

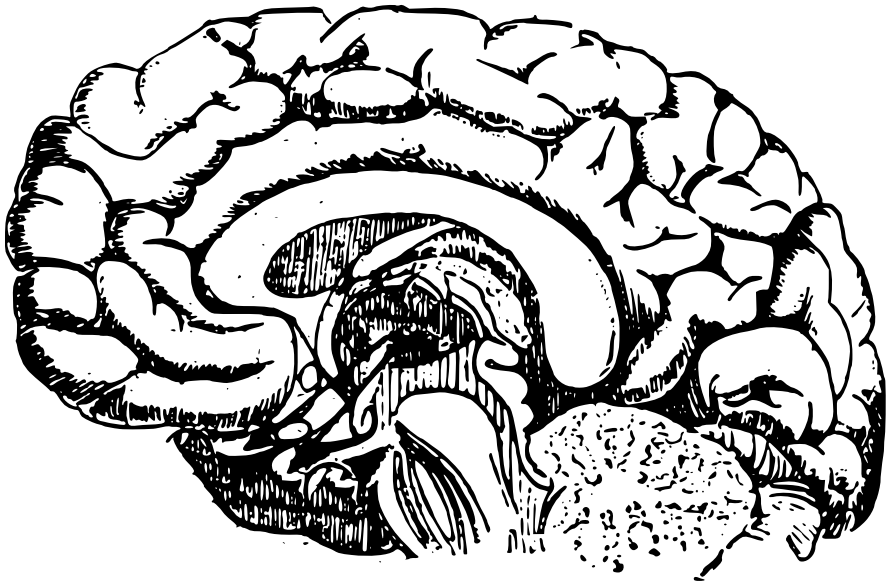
Genetic gender predisposition theorists further reference case studies in which males with damaged genitalia undergo plastic surgery as infants to modify their genitalia to be more female aligned. These infants are then raised as girls, but often become gender nonconforming. David Reimer is an example of one of these cases (Bevan, 2017). To learn more about this case, you can read his book, *As Nature Made Him*. I've also attached an educational YouTube video that does a decent job summarizing David's case. This video may be distrurbing for most viewers. Warning. (linked here: https://www.youtube.com/watch?v=JfeGf4Ei7F0(opens in new window).

5.4.3. Epigenetics

This area of focus does not look at DNA, but rather things that may impact DNA mutations or the expression of DNA. Really, this area falls into two subcategories: prenatal hormonal exposure and prenatal toxin exposure.

Let's quickly recap basic biology. It is thought that gender, from a biological theory stance, begins in the fetal stage. This occurs due to varying levels of exposure to testosterone. Shortly after birth, boys experience an increase in testosterone, whereas girls experience an increase in estrogen. This difference has actually been linked to variations in social, language, and visual development between sexes. Testosterone levels have been linked to sex-typed toy play and activity levels in young children. Moreover, when females are exposed to higher levels of testosterone, they are noted to engage in more male-typical play (e.g., preference for trucks over dolls, active play over quiet), rather than female-typical play compared to their counterparts (Hines et al., 2002; Klubeck, Fuentes, Kim-Prieto, 2017; Pasterski et al., 2005). Although this has been found to be true predominantly utilizing only animal research, it is a rather simplified theory. What we have learned is that, truthfully, things are pretty complicated and other hormones and chemicals are at play. However, for this class, we will not get into the nitty gritty details (Bevan, 2017).

Prenatal toxin exposure appears to be relevant when examining diethylstilbestrol (DES), specifically. DES was prescribed to pregnant women in late 1940's through the early 1970's. DES was designed to mimic estrogen, and it does; however, it has many negative side effects that estrogen does not. One of the negative side-effects is that it mutates DNA and alters its expression. The reason it was finally taken off the market was because females were showing higher rates of cancer. In fact, they found that this drug had cancer-related impacts out to three generations! While there was significant research done on females, less research was done on males. However, recent studies suggest that 10% of registrants (in a national study) that were exposed to DES reported identifying as transgender or transsexual. For comparison, only 1% of the general population identifies as transgender or transsexual. Thus, it is theorized that gender development in those exposed to DES, particularly males, were impacted (Bevan, 2017).



5.4.4. Learning

Okay, before we get too far, you are probably wondering how learning is related to biological theories. Well, really, it is due to the areas of the brain that are impacted. So, as we *very briefly* review this, focus on the different brain structures that impact the learning capacities of each area. Within learning-based biological theories, there are five types of learning theorized to occur.

First, *declarative episodic learning* is learning that occurs by observing or modeling behavior, which requires an individual to be able to verbally recall what has been observed. The verbal recall component is the *declarative* component and the individual actually experiencing the events (not simply being told about them) is the *episodic* component. Next, *declarative fact learning*, is simply learning by being presented factual information. Third is *nondeclarative motor learning*, which heavily involves the cerebellum. This is learning essentially done through motor practice. Fourth is *declarative procedural learning*. This learning relies on subcortical striatum structures. This focuses on learning sequencing for behaviors. And lastly, *nondeclarative emotional learning* involves the amygdala and hypothalamus. This is learning in which we get behavioral feedback from people and our environment and incorporate this (Bevan, 2017).

Module Recap

In this module, we created a foundational knowledge of several theories of gender development. We learned about the beginning theories, with psychodynamic theories from Freud and Horney. We then jumped into learning about social-based theories of social learning and social-cognitive theory. We took a detailed look into various socializing factors that children encounter. Then we uncovered two cognitive-based theories – Kohlberg's theory and gender schema theory. And lastly, we took a brief look at various biological explanations of gender development.

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3: APPLYING A BIOLOGICAL LENS

3.1: Module 6 – Gender Through a Human Sexuality Lens
3.2: Module 7 – Gender Through a Cognitive Psychology Lens
3.3: Module 8 – Gender Through a Physiological Psychology Lens

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3.1: Module 6 – Gender Through a Human Sexuality Lens

Module 6: Gender Through a Human Sexuality Lens

Module Overview

In this module, we will focus on a variety of domains regarding human sexuality. We will first examine the foundational studies of sexology. Then we will learn about sexual orientation and sexual fluidity. We will also learn about what it means to be transgender and the process of transitioning. Finally, we will examine gender and sexual roles including double standards in sexual behavior and "hookup culture."

Module Outline

- 6.1. Sexology
- 6.2. Sex Education
- 6.3. Sexual Orientation
- 6.4. Transgender
- 6.5. Gender Roles and Rules for Sexual Behavior

Module Learning Outcomes

- Understand the origins of the study of sexual behavior.
- Overview sex education programs in the U.S.
- Gain foundational understanding of sexual orientation and the complexities of identity, attraction, expression, and anatomical sex.
- Understand how gender roles impact sexual behaviors.

6.1. Sexology

Section Learning Objectives

- Gain a brief and basic understanding of the beginnings of sexology by Dr. Alfred Kinsey.
- Understand Masters and Johnsons contribution to our knowledge about the human sexual response cycle
- Discuss the largest U.S. study of sexual behaviors.

6.1.1. Alfred C. Kinsey

Dr. Alfred C. Kinsey was a biology professor that founded the Institute for Sex Research in 1947. The institute is located at Indiana University and is still active. Although originally named the Institute for Sex Research, in 1981 the institute was renamed The Kinsey Institute for Sex research ("Dr. Alfred C. Kinsey," n.d.).

Kinsey is often credited for shifting society's perception and understanding of human sexuality. His research focused on understanding the frequencies and occurrences of sexual behavior and consisted of conducting thousands of face-to-face interviews to obtain sexual histories ("Dr. Alfred C. Kinsey," n.d.). He felt that face-to-face interviews would be the most likely way to obtain honest answers. However, he recognized that he and his team would have to be carefully trained so as not to react in a judgmental way in order to gain as much trust from their interviewees as possible. He assured interviewees of confidentiality, and to this date, there is no known comprise of the interviewees' identities.

In Kinsey's beginning stages of researching human sexuality, he collected approximately 2,000 individuals' sexual histories. In his career total, his team gathered 18,000 sexual histories! You can watch one here: : https://www.youtube.com/watch?v=TIGzC_Fmh5c(opens in new window) [www.youtube.com] . The sexual histories that were gathered were published by

Kinsey in two separate works: S*exual Behavior in the Human Male,* published in 1948, and *Sexual Behavior of the Human Female*, published in 1953. Collectively, the reports that Kinsey's team gathered are often referred to as the Kinsey Reports ("Dr. Alfred C. Kinsey," n.d.).

Dr. Kinsey also developed the Kinsey Scale (originally known as the Heterosexual-Homosexual Rating Scale). I would link the test here, but it is not an actual physical test! Rather, the scale is used by an interviewer from Kinsey's team to rank an individual based on their sexual history gathered from 0 to 6. The numbers reflect a continuum in which the extreme low score indicates solely heterosexual behaviors and attraction and the highest extreme reflects solely same-sex behavior/attraction. whereas the middle area of the continuum reflects varying attraction and behavior for both sexes. ("The Kinsey Scale," n.d.).

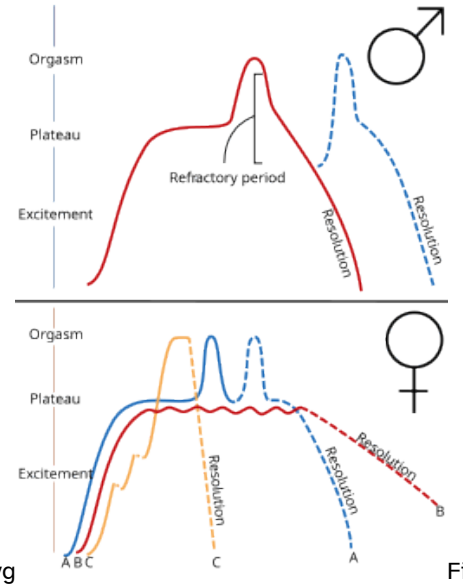
6.1.2. Masters and Johnson

Shortly after Kinsey laid the foundation for sexual research, William Masters and Virginia Johnson began researching human sexual responses. Their work began in the later end of the 1950's. Although Kinsey had focused on the frequency of various sexual behaviors, Masters and Johnson sought to study the anatomy and physiological responses in the human body during sexual experiences. They began their work in St. Louis at Washington University and later founded the Reproductive Biology Research Foundation which later was known as the Masters and Johnson Institute ("Masters & Johnson Collection," n.d.). Their work required the direct observation of sexual activity (i.e., manual masturbation or sexual intercourse). Although somewhat scrutinized, their method of participant selection was more heavily scrutinized. Initially, they enlisted prostitutes into their sample until they were able to recruit more participants.

Masters and Johnson are most known for their sexual response cycle theory. Prior to this, not much information about the actual cycle and process of sexual responses were known. Their theory posited that sexual response occurs in four stages. For both men and women, the sexual response has four phases: Excitement (1), Plateau (2), Orgasm (3), Resolution (4) (Crooks & Baur, 2013).

1. **Excitement Phase –** When myotonia (when muscle tension increases throughout the body and both involuntary contractions as well as voluntary muscle contractions) as well as vasocongestion (when tissue fills with blood due to arteries dilating which allows blood to flow to tissue at a rate faster than veins can move the blood out of the tissue, leading to swelling), high heart and breathing rates, and increased blood pressure occurs.
2. **Plateau Phase –** This is really the opposite of how it sounds. This is when there is actually a surge of tension that occurs and tension continues to increase in the body. Blood pressure and heart rates surge. This usually lasts anywhere between a few seconds to a few minutes. The longer this phase is, typically, the more intense an orgasm is.
3. **Orgasm Phase –** The climax period in which blood pressure and heart rates peak and involuntary muscle spasms occur. Typically speaking, this is the shortest phase.
4. **Resolution Phase –** When myotonia and vasocongestion dissipates.

This same cycle, and order, is experienced no matter the sexual stimulation/activity (e.g., masturbation, vaginal intercourse). However, how intense the cycle/phases are and how rapid one moves through them may vary depending on the sexual stimulation/activity. Moreover, men and females experience all of these stages in the same order. However, there are some slight differences within the cycle between men and women. For example, women may more easily experience multiple orgasms than men. Moreover, men experience a refractory period (minimum amount of time that men must wait before the body can actually climax again, following ejaculation)., whereas, women do not (Crooks & Baur, 2013).



File:Sexual-response-cycle_cj6h.svg File:Sexual-response-cycle.svg

6.1.3. National Survey of Sexual Health and Behavior

Also coming out of Indiana University was the largest sex-focused survey to be conducted in the United States – the National Survey of Sexual Health and Behavior. The survey's first wave of participants and data was collected in 2009. The study, in total, has over 20,000 participants ranging in ages as young as 14 and as old as 102. The survey data has led to over 30 different research publications/articles. In general, the survey has included items that address and explore a variety of sex-related domains including, but not limited to: condom use, intimate behaviors (e.g., kissing, cuddling) as they relate to sexual arousal and intimacy, sexual behavior patterns in varying sexual orientations, sexual identities, sexually transmitted disease knowledge, and relationships/relationship patterns ("NSSHB," n.d.).

From the first wave of data collection, results from the NSSHB revealed that a majority of U.S. youth are not engaging in regular intercourse; condom use was not perceived by adults to reduce sexual pleasure; men are likely to have an orgasm during vaginal intercourse, but women's experiences of orgasms are more varied (e.g., orgasms may be more likely when various acts occur such as oral sex); although less than 7-8% of participants identified as gay, lesbian, or bisexual, a much higher percentage reported engaging in same-sex behavior at some point; women are more likely to identify as bisexual rather than lesbian; males perceive that their partners orgasm more often than women report actually orgasming (and male/male sexual occurrences do not account for the discrepancy); older adults continue to report active sex lives, and the lowest rate of condom use is in adults over 40. From more recent waves of data, the following has been found: women tend to be more open and accepting of individuals that identify as bisexual than males are, most people report being in a monogamous relationship, same-gender sexually oriented individuals are less likely than opposite-gender sexually oriented individuals to report monogamy, ("NSSHB," n.d.).

6.2. Sex Education

Section Learning Objectives

- Gain foundational understanding about varieties of sex education programs
- Learn about the effectiveness of comprehensive sex education

6.2.1. Overview

Sex education is varied in the United States. Before we talk specifics, let's talk about the variations. Sex education is either abstinence-only (AO) in which abstaining from sexual activity is taught to be the only option to avoid negative outcomes related to sex, abstinence-plus (Aplus) in which abstinence is focused on and stressed, but some information about contraception and condoms is given, and comprehensive sex education (CSE) in which medically-accurate information about sex, reproduction, protection and contraception, gender identity, and sexual orientation is covered. Although about half of the US states require that some form of sex education be provided, only 13 require the material presented to be medically accurate. Moreover, a majority of

states require that if sex education is presented, abstinence must be included whereas only a minority require that contraception education be included (Abstinence Education Programs, 2018).

Abstinence-only was heavily federally funded in the 1980's and, thus, was a strong incentive to implement AO education in schools. AO programs peaked during the Bush administration and then began dropping in Obama's administration. In 2017, about 1/3 of funds were provided for AO programming. Proponents of abstinence-based education argue that this type of education delays teens first sexual encounter and reduces teen pregnancy. However, research does not support most of the claims made. In fact, studies reveal that teens that received abstinence-based education are more likely to have unprotected sex when they do have sex. Additionally, although youth with this education provided have more knowledge about STIs, they actually have less knowledge about condoms and how effective condoms are at preventing STIs (Abstinence Education Programs, 2018). Moreover, some statistics show that an emphasis on AO programs may actually be correlated with higher teen pregnancy rates (Stangler-Hall & Hall, 2011), which is consistent with the above statistic revealing that youth that receive AO programming are more likely to have unprotected sex.

6.2.2. Comprehensive Sexual Education (CSE)

Comprehensive sexual education programs cover sexual education in depth and are not simply limited to concerns of risk reduction. These programs focus on human development, physical anatomy of humans and sexual responses, attraction, gender identity and sexual orientation, and contraception and protection. The American College of Obstetricians and Gynecologists recommended that CSE programs contain medically accurate information that is appropriate for the age of the audience. A CSE program may focus on providing not only information about pregnancy and STIs, but also other benefits to delaying intercourse, as well as information about reproduction and contraception (The American College of Obstetricians and Gynecologists, 2016).

CSE has been shown to reduce sexual activity, risky behaviors, STIs and teen pregnancy in youth**.** Kohler, Manhart, and Lafferty (2008) compared abstinence-only to CSE programing and found that youth that received CSE programming had less occurrence of teen pregnancy compared to youth that received no programming, but a significant difference in rates was not found between AO and CSE. However, AO had no impact on delaying initial intercourse, whereas CSE had minor impacts on lowering the likelihood of intercourse (Kohler, Manhart, and Lafferty, 2008).

A meta-analysis comparing AO and CSE showed that AO does not delay initial intercourse and less than half of programs had a positive impact on sexual behavior; however, 60% of CSE programs showed positive impacts including delayed initial intercourse and increased use of condoms/contraception (Kirby, 2008). Individuals receiving CSE were also 50% less likely to become pregnant as a minor compared to youth that received AO programming. Youth receiving CSE programming are less likely to have sex compared to youth that receive AO programming, but are more likely to delay their first sexual encounter, have less sexual partners, and engage in more protected sex (Abstinence Education Programs, 2018).

6.3. Sexual Orientation

Section Learning Objectives

- Understand the Genderbread Person and how it helps conceptualize sexual orientation and identity.
- Review various sexual orientations.

Definition. A part of one's identity that involves attraction to another person, may that be in a sexual, emotional, physical, or romantic way. Broadly speaking, orientation has been defined as binary: either heterosexual (opposite-sex/gender attraction) or homosexual (same-sex/gender attraction). However, sexuality research and awareness efforts have led to discussions regarding orientation to take place more on a continuum, and including a variety of orientations, which we will discuss.

6.3.1. Genderbread Person

Before we go into detail with some of the broader orientations, let's first discuss the genderbread person (Killerman, 2017). This is important because it helps us understand orientation, on a continuum, as it relates to various aspects such as birth sex, anatomical sex, gender identity, gender expression, sexual attraction, and romantic attraction.

6.3.1.1.Sex. We are all born with a *biological* sex. However, one's current anatomical sex may or may not align with one's birth sex, particularly if a transsexual individual has undergone sexual reassignment surgery (we will discuss this more later on).

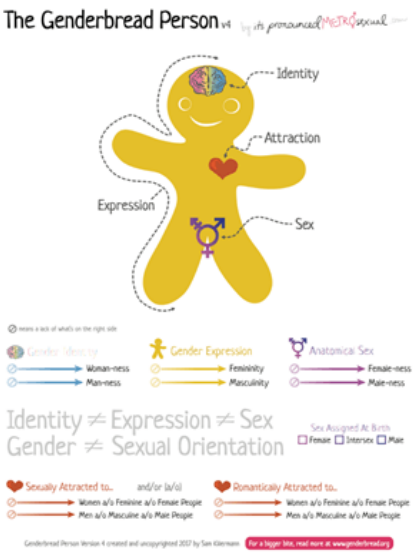
6.3.1.2.Identity. This deals more with our cognitions and thoughts about ourselves. This is how we identify. We may be, biologically speaking, female, but identify as a male. We may be male and identify as male. We may have some continuum of identification as well. Identity is not determined by either anatomical sex, gender expression, or sexual or romantic attractions. One may be female, and identify as male, but dress and express themselves as a female, be attracted sexually to males, and be attracted romantically to females – or any combination or variation.

6.3.1.3.Gender expression. Gender expression is how one acts, dresses, and portrays themselves in regard to gender norms. One may present themselves as extremely masculine or feminine. One may present as androgynous, meaning gender-neutral or equally masculine and feminine. Gender expression can also change, not only from day to day, but moment to moment. For example, a female getting ready for a date with her husband may dress up and express very feminine gender norms; however, that same female may have expressed very masculine norms and behaviors an hour earlier when playing in her rec dodgeball league.

6.3.1.4.Attraction. When discussing attraction, there is sexual attraction and romantic attraction. Remember, just like everything else we have discussed, one does not determine the other. For example, one may be romantically attracted to men, but sexually attracted to females. One may have romantic attraction to either or both men and women, but not be sexually attracted to either, etc. Sexual attraction refers to who you are aroused by and desire to be sexually intimate with. Romantic attraction refers to who you seek and desire in an emotional way.

A link to the Genderbread Person that visually illustrates all of these concepts on a continuum (and is shown in Figure 10.1) can be found here:

https://www.genderbread.org/wp-content/uploads/2018/10/Genderbread-Person-v4.pdf(opens in new window)



The Gingerbread Person

Figure 1. Genderbread Person (direct source: Sam Killerman – https://www.itspronouncedmetrosexual.com/2018/10/the-genderbread-person-v4/(opens in new window) [www.genderbread.org])

6.3.2. Asexuality

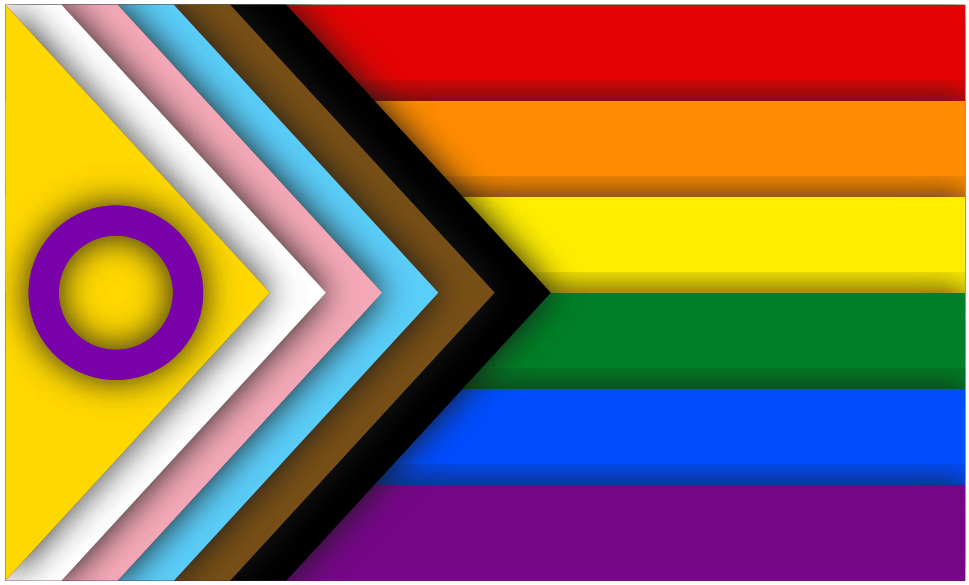
Asexuality is a sexual orientation characterized by the lack of sexual attraction to another individual – it is **not** a sexual disorder. Asexuality is one of the most understudied orientations, and there is some debate on if asexuality is the lack of orientation or an orientation itself. Only about .5- 1% of the population identifies asexual, but it is thought that this is potentially a slight underestimate.. Individuals that identify as asexual are predominately white (Deutsch, 2017).

Despite misconception, being asexual does not mean that an individual does not engage in sexual behavior or intercourse. It is also not defined by virginity, having a low sex drive, or masturbation. Individuals that are asexual may experience physical, sexual arousal. Although some may be disturbed or disgusted by their own arousal, others may simply not feel connected to individuals or their arousal which is known as *autocrissexualism* (Deutsch, 2017).

Asexuality exists in various forms – we will cover some, but not all. For example, gray asexuality is an orientation in which an individual experiences low levels of attraction, whereas demisexuality is an orientation in which an individual only experiences sexual attraction when a close bond is formed. Keep in mind, an individual that identifies as asexual may still have romantic attractions toward any gender (Deutsch, 2017).

6.3.3. Heterosexual

Heterosexual is defined as being attracted to the opposite gender. A majority of the population identifies as heterosexual, and much of our cultural assumptions and biases are due to this. Historically, heterosexuality has been considered 'normative,' and thus, anything other than heterosexualism was 'abnormal.' Fortunately, there has been significant efforts to shift this mindset, but the lasting impacts of this are still present today.



6.3.4. Same-Gender Sexuality

Although rates vary depending on which study and statistic is cited, approximately 3.5% of the U.S. population identifies as being sexually attracted to the same-gender (same-gender sexuality, homosexuality; Gates, 2011). Specifically, about 2-4% of males and 1-2% of females identify as being homosexual. However, women are actually 3 times more likely to report having engaged in some same-gender sexual behavior at some point in life compared to men. Moreover, although less than 5% identify as homosexual, about 11% of individuals report being attracted, to some degree, to same-gender individuals and 8.2% reported same-gender sexual behavior (Gates, 2011).

Same-gender attraction can be exclusive, meaning that the individual is only attracted to same-gendered individuals, and individuals may use labels such as gay (males) or lesbian (females) to define/describe their orientation. However, some individuals may be attracted to both same- and opposite-gendered individuals, which is often defined/described as bisexual. Females are more likely to identify as bisexual than males (Copen, Chandra, and Febo-Vazquez, 2016). Women are more accepting of bisexual individuals then men. Moreover, in general, female bisexual individuals are more accepted than male bisexual individuals (Dodge et al., 2016).

6.3.5. Sexual Fluidity

Sexual fluidity is a concept in which we move away from thinking in binary ways (heterosexual or homosexual) and move into a more fluid understanding – essentially the entire premise behind the Genderbread Person. An individual that is bisexual, may be considered to have sexual fluidity; however, pansexual individuals likely align with sexual fluidity a bit more. *Pansexual* is a word used to identify individuals that are attracted to all genders either in sexual, romantic, or spiritual ways (Rice, 2015). How are pansexual and bisexual different? Well, bisexual (in the name) indicates a binary requirement (male or female) whereas pansexual indicates an individual is attracted to a spectrum of genders (and does not consider gender to be binary; Rice, 2105).



6.4. Transgender

Section Learning Objectives

- Define the term transgender.
- Provide psychoeducation on terminology and appropriate verbiage.
- Understand, at a basic level, the process of transitioning.

6.4.1. Defining Transgender

Transgender and transsexual do not refer to a sexual orientation. These terms define an individual's gender identity and/or anatomical sex. Transgender is a term used to define an individual that identifies with a gender that does not align with their biological sex. For example, an individual that is born a female, but identifies as male, may label themselves as transgender. Transsexual is an older term that is used less often today. This term was used to specifically identify individuals that identify with a gender inconsistent with their biological birth sex and sought medical interventions (such as hormone therapies, surgical reassignment) to change their hormonal and/or anatomical makeup to more closely align with their self-identified gender. Although some transgender individuals may wish to seek medical interventions, one should not assume that someone that is transgender has a desire to pursue interventions. Also, sexual orientation varies in transgender individuals, just as it does in cisgender (when a person's gender identity and birth sex align) individuals.

Male-to-female (MtF) and female-to-male (FtM) are terminology often used to help individuals communicate and understand their identity. Specifically, MtF indicates an individual who was born with male genitalia and chromosomal/hormonal makeup and that has transitioned to female genitalia and/or hormonal therapy or they may perhaps even change legal documents or how they dress to more closely align with their gender identity if they don't desire medical interventions. When referring to a transgender person's gender, one should use the pronouns the individual uses for themselves, which often is related to their stage of transitioning. For example, if a FtM individual is transitioned and refers to himself as male, one should also use male pronouns and **not** female pronouns.

Approximately .3% of adults identify as transgender. About 27% to MtF individuals are attracted to men, 35% to women, and 38% to both men and women. About 10% to FtM individuals are attracted to men, 55% to women, and 5% to both men and women (Gates, 2011; Copen, Chandra, & Febo-Vazquez, 2016).

6.4.2. Gender Dysphoria

Transgender is **not** a disorder. However, the DSM-5 includes a diagnosis of gender dysphoria, which is generally defined as when

a person has significant internal distress due to feeling that their biological sex is incongruent with their gender identity. Many transgender individuals experience gender dysphoria. In fact, gender dysphoria in children persists to adulthood in anywhere between 12 to 27 percent of individuals (Coleman, et al., 2012). However, heterosexual and homosexual individuals may experience gender dysphoria alike, as gender identity is independent form sexual orientation.

6.4.3. Transitioning

Transitioning is the process of moving from living one's life as the gender that aligns to their birth sex, to the gender the individual identifies as. Transitioning can involve a variety of things, including changing one's name on legal documents, dressing in a way that aligns with one's gender identity, utilizing noninvasive procedures (hair removal, makeup tattooing), hormone therapies, and sex reassignment surgeries.

6.4.3.1. MtF. Surgery may consist of facial feminization in which plastic surgeries are conducted to feminize one's face, breast augmentations, either the enhancement/reduction of the buttock, vaginoplasty (conversion of male scrotum and penis to a vagina with a clitoris and labia), and thyroid cartilage removal (to reduce the appearance of an Adams Apple). Nonsurgical options might include hormone therapy, voice training, hair removal, and other minor procedures such as Botox (The Philadelphia Center for Transgender Surgery, n.d.).

6.4.3.2. FtM. Surgery may consist of chest masculinization (removal of the female breasts), phalloplasty/metoidioplasty (either constructing a penis and scrotum or releasing the clitoris to create a micropenis), buttock reduction, etc. Nonsurgical options include hormone therapy and voice training (The Philadelphia Center for Transgender Surgery, n.d.).

Before surgery options can occur, various prerequisites must be met by an individual, typically including (1) the individual is experiencing true gender dysphoria., (2) at least one, but often two, mental health providers that specialize in gender identity concerns recommending the individual for surgery (must specialize in gender identity), (3) has received hormone treatment for at least one year, (4) has been living as the gender they identify as for at least one year, (5) is considered emotionally stable, and (6) is medically healthy. (The Philadelphia Center for Transgender Surgery, n.d.).

Hormone therapy involves taking a prescribed amount of hormones to produce secondary sex characteristics in the gender one identifies with. Hormone therapies appears relatively safe for transgender men (FtM), but for women (MtF), there is a 12% risk for a negative medical event such as thromboembolic or cardiovascular occurrence (Wierckx, 2012).

6.5. Gender Roles and Rules for Sexual Behavior

6.5.1. Scripts for Sexual Behavior

Sexual script theory posits that we engage in particular sexual behaviors due to learned interactions and patterns. We learn this "script" from our environment, culture, etc. We adjust our behaviors to fit the script so as to align with general expectations. Scripts are often influenced, largely, by culture and are frequently heteronormative. We learn scripts from people in our life, and those same people, as well as society and media, reinforce those scripts. Scripts are also influenced by our interpersonal experiences (experiences with others) and intrapersonal experiences (internalization of scripts). What our culture teaches us about scripts, then plays out in interpersonal experiences. How we interact with our partner may be largely based on engaging in behaviors that align with culturally congruent scripts. This often leads to patterned script behavior within partners. For example, if the male in a relationship is the one that initiates sex in the beginning (largely based on sexual script), then over time, the female may continually wait for the male to initiate sea, rather than initiate it herself. This is now an interpersonally-based script that started from a broader, culturally-based script. This may then become internalized and repeated in other relationships for the female (intrapersonal influence on scripts). There may also be very negative feelings if one contradicts a generally accepted sexual script (e.g., guilt for not acting like other females, etc.; intrapersonal experience).

The heterosexual script is the most prominent in the US, and it consists largely of three specific components including a doubles standard (e.g., men are supposed to desire sex where as women should resist it), courtship roles (e.g., men are responsible for initiating things such as sex and dates whereas women are to wait and response), and desire for commitment (women desire committed relationships and male avoid it; Helgeson, 2012). Women are often scripted to be timid, hesitant, and passive in sexual encounters and interactions, whereas men are scripted to be aggressive, dominant, and in control. There is a double standard within sexual scripts, often in which women are expected not to engage in sex outside of a relationship, whereas men are expected, and often praised, for doing so. Women are scripted to desire committed relationships whereas men desire sex

with minimal emotional investment (Seabrook, et al., 2016). Men are scripted to initiate sex and to be more sexually advanced and experienced than women, desire sex in uncommitted contexts, and have more sexual partners than women. Women are scripted to be desired, have lower sex drives than men, to wait for a male to initiate sex and then resist it, and be less sexually experienced than men. Whereas women are scripted to desire intimacy, trust, and committed relationships, men are not (Masters, Casey, Wells, & Morrison, 2013).

Why do we adhere to scripts? Well, not adhering to them has a risk involved. For example, if you are interested in someone that holds the beliefs of traditional sexual scripts, and you engage in a way that is inconsistent with the script, they may no longer be interested in you. Essentially, you risk losing the interest of someone you are interested in. You also risk being judged negatively and experiencing direct or indirect 'punishment' or negative consequences (as just discussed). Let's take an example. It is a common expectation in sexual scripts that a male will pay for dinner on a date. What if he doesn't and the female follows traditional scripts? Will she go on another date with him? What if a female makes the first move towards a kiss, and a male subscribes to traditional scripts? Will he want to go on another date with her? (Garcia, 2010).

6.5.2. The Double Standard

The double standard in sexual behavior began to be researched in the 1960's by Ira Reiss. Reiss was one of the first to study the double standard in the context that society prohibited women to engage in premarital sexual behavior, but allowed men to (as cited by Mihausen & Herold, 1999). The double standard impacts a variety of sexual factors such as age of first intercourse (men having a younger age), number of sexual partners (men having a more), etc. Regarding sexual behavior, males, even in adolescence, are often praised for sexual conduct and promiscuity whereas girls are often shamed. Boys are more accepted by their peers as sexual partner counts increase whereas girls are less accepted by their peers (Kraeger & Staff, 2009). Kraeger (2016) also found that a girl having a sexual history (e.g., reported having sex), led to a gradual decline in peer acceptance, whereas males with the same history experienced an increase in peer acceptance. Interestingly, although much of the above information is related to the double standard related to sex, may that be intercourse, oral sex, etc., there appears to be a slightly different story with kissing or "making out." Girls are more accepted by their peers, whereas boys are less accepted, when it comes to making out (Kraeger, 2016). Reflections of the double standard may not be just in perceptions and attitudes, but in actual sexual encounters. In general, in hookups, males reach orgasm more often than females (Garcia et al., 2010).

Milhausen and Herold (1999) found that although women believe there is still a sexual double standard, they denied that they held the double standard themselves. Moreover, participants believed other women, more than men, held the double standard belief. Conversely, data shows that men tend to hold double standard beliefs. Overall, on average, the double standard still is present. Although young men and women are challenging it, in general, the double standard persists. For example, ¾ of individuals reject the double standard when considering hooking up, but at least ½ of individuals hold some amount of a double standard belief (Sprecher, Treger, & Sakaluk, 2013; Allison and Risman, 2013).

6.5.3. Hookup Culture

A 'hookup' is defined as an event in which two individuals that are not committed to each other, or dating, engage in sexual behavior, which can include intercourse but may also include oral sex, digital penetration, kissing, etc. Typically speaking, there is no expectation of forming a romantic relationship or connection with each other (Garcia, Reiber, Massey, & Merriwether, 2013). 'Hooking up' is becoming more socially acceptable and a common experience for young adults in the US. But what has led to this? In the 1920's, sexual promiscuity and casual sex became more open and accepted. As time progressed, and medicine advanced (e.g., birth control), the acceptance of openly discussing sex and the frequency of casual sex, or sexual behavior that broke previous, traditional and/or moral/religious boundaries (e.g., only having sex in marriage) became more common. Today, the media often focuses on sexuality and may overly portray sexuality (e.g., over 75% of tv programming has sexual content; as cited by Garcia, 2010). This may lead to a misunderstanding of actual sexual behavior for youth. For example, college students tend to significantly overestimate how promiscuous their peers are (Chia & Gunther, 2006; Reiber & Garcia, 2010). Recent data suggest that anywhere between 60-80% of young adults in the US have had a hookup. Even in adolescents, 60-70% of youth that are currently sexually active reported having at least one hook up (as cited by Garcia et al., 2013). Friends with benefits (FWB) is a relationship in which two people contract to have purely sexual intimacy but do not date, emotionally-bond, etc. Sixty percent of college students report having a FWB relationship at some point.

There are some gender differences in frequency and feelings after hooking up. Women are more conservative than men regarding causal sex attitudes. In general, both males and females report varied feelings. About half of men report feeling positive after hooking up, about 25% report feeling negative, and the remaining 25% report mixed feelings. For women, things are slightly reversed – about 25% feel positive, 50% feel negative, and 25% report mixed feelings. Although data is mixed, statistics often

show that around ¾ of people, in general, report feeling regret after a hookup. Two factors that seem to lead to regret is a hookup with someone that the individual just met (known less than 24 hours) and someone that they hookup with only once. Men may be more regretful because they feel they used someone whereas women may feel regret because they felt used. In general, women have the most negatively affective impacts from hookups (Garcia et al., 2013).

A majority of college students did not fear contracting an STI following a hookup and less than half used condoms during a hookup. Factors leading to hooking ups vary. Substance use is highly comorbid with hooking up, especially alcohol. This often leads to unintended hookups. Feeling depressed, isolated, or lonely is a common factor leading to hookups. In general, individuals who usually have lower self-esteem tend to participate in hooking up. (Garcia et al., 2013). The impact of hookups vary as well. If an individual experienced high levels of depression and loneliness, they sometimes report actually experiencing a reduction in this following a hookup. However, if an individual did not have depressive symptoms prior to a hookup, they actually may be more at risk for developing depressive symptoms afterward (Garcia et al., 2013).

Module Recap

In this module, we first focused on understanding the beginning stages of researching human sexuality. We then examined and learned about various sexual orientations. Additionally, we discussed transgender and the process one goes through to transition. Finally, we examined gender and sexual roles including double standards in sexual behavior and “hookup culture.”

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3.2: Module 7 – Gender Through a Cognitive Psychology Lens

Module 7: Gender Through a Cognitive Psychology Lens

Module Overview

In this module, we will learn about the actual and perceived differences in cognitive development and functioning in males and females. First, we will take a look at language and how languages impact gender, as well as how gender impacts the way in which we utilize language and communicate. Next, we will learn about cognitive differences between males and females. Are males really better at math than females? Well, we will see. Finally, we discuss how perceived differences may impact our performance.

Module Outline

- 7.1. Language
- 7.2. Cognition

Module Learning Outcomes

- To become familiar with gendered versus nongender language
- To understand how gender impacts communication and language patterns
- To recognize the similarities and differences in cognitive development and abilities across gender
- To begin to decipher real differences in abilities and perceived differences in abilities across gender
- To gain an understanding of how perceived differences may impact stereotypes and how those stereotypes then impact performance.

7.1. Language

Section Learning Objectives

- Gain foundational knowledge on the differences in how males and females communicate and use language
- Understand gender versus nongendered language and their impacts



7.1.1. Sex and Gender Differences in Language

Language can impact many components of our lives. The words we choose, how we are spoken to, and the meaning that is attached to those experiences can completely make or break an experience. Have you ever noticed you have a different way of communicating than a friend or coworker? Have you ever noticed that you change your way of communicating based on who you are interacting with? You probably answered yes, and that is common. How about this – do you think that you change how you communicate depending on if you are talking to a male or female? What about your own gender – does that impact how you communicate? Let's find out!

Before we get started, lets discuss affiliative and assertive speech. *Affiliative speech* consists of a speech style in which an individual's speech includes high levels of attempts to relate and support the listener/other individual. *Assertive speech* focuses on ensuring one's needs/points/ are communicated to the listener/other individual. For example, someone using affiliative speech may say something like, "I understand why you are frustrated that you cannot attend the event. I would be frustrated, too." whereas someone using assertive speech may say something such as, "It is not logical for you to attend the event. I need you here to manage the calls."

Women traditionally are generally stereotyped as more talkative, warmer, and more affiliative in their speech and men are stereotyped to be less talkative and more assertive and direct in their speech (Carli, 2017; Leaper & Ayres, 2007). However, research actually shows, although in childhood, girls talk more than boys (Carli, 2017; Leaper & Smith, 2004), in adulthood, men actually talk more than females (Leaper & Ayres, 2007)! In childhood, boys appear to use more assertive speech, whereas girls engage in more affiliative speech, but again, these differences are small (Carli, 2017; Leaper & Smith, 2004).

The stereotype of women being more affiliative, and men more assertive, does have some evidence backing into adulthood (Leaper & Ayres, 2007). In general, women tend to disclose more about themselves and their personal lives to others. They offer more support in conversations, and search for areas of "relatedness." Women also tend to be less direct in their communication (Carli, 2017). In contrast, men tend to be much more direct in their communication, offer more suggestions and corrections, and interrupt more frequently. However, women and men tend to show more affiliative interactions when they are interacting with women, than they do if they are interacting with men. More pleasant tones are used, more compliments are provided, and smiles offered, when interacting with women (Carli, 2017). So, it is not just our own sex that impacts our language, but also those who we are interacting with matters (Carli, 2017; Leaper & Ayers, 2007). For example, men are shown to evidence increased talking when they are with strangers or are in a group. Even more interesting, when we are with people we do not know, we are more likely to use more gender stereotypical language use (Leaper & Ayers, 2007). However, when we are discussing areas in which we feel we have an expertise, or are in a position of having more power, we engage in more assertive communication, despite our sex or gender.

Although there are some sex differences in the way we communicate, men and women equally engage in providing cues of acknowledging that they are listening, giving directives, offering criticism, and presenting as agreeable. Moreover, when differences are noted between men and women, the differences found tend to be fairly small (Carli, 2017).

What about nonverbal communication? The biggest differences between men and women appears to be the frequency in which one smiles (Carli, 2017). It seems women smile more than men (LaFrance, Hecht, & Paluck, 2003). The frequency in which one touches another person, when the other person is the opposite gender, while communicating is the same between men and women (Hall & Veccia, 1990). Essentially, women touch men and men touch women to a largely equal frequency when communicating. However, women will more frequently touch another woman while communicating than a man will touch another man.

7.1.2. Gender Influences on Language

Why is it that males and females tend to use language differently? One theory is explained by the social role theory. S*ocial role theory* outlines that the reason there are differences in the behavior of males and females is due to roles that each have within society. Essentially, societal structure influences the behaviors of individuals. A large component of society and societal structure is work and labor. Thus, labor division strongly dictates the behavior of men and women. Typically, labor of women is focused on domestic tasks and labor of men is focused more on work and tasks outside of the home. Social role theorists would explain that biology has a place within this theory because the physical makeup, influenced by biology, helped to define the labor roles. For example, men are bigger and stronger, physically, and thus, they were better able to do manual labor outside the home that required strength. Thus, this led to male roles being more focused to tasks outside of the home. Whereas women are able to bear children, and thus, biologically they are primed for domestic tasks and nurturing. However, as society has changed, the biological basis of the establishment of some of these roles has become less relevant; thus, in societies in which this is true, we see a

decline in division of roles (Helgeson, 2012).

So, what does that have to do with language? Well, because women's roles have been focused on the home and nurturing, it fosters more communal and affiliative behaviors. Social role theory posits that the female role is primed to be agreeable, and to engage in more smiling, and nonverbal acknowledgement, all in efforts to build relationships. Adults are also more likely to command a girl to do something than a boy, thus, again, foster agentic behavior in boys and communal behavior in girls (Whiting & Edwards, 1988). Males fostered agentic may contribute to males using less attempts, through language, to attempt to foster relationships, and may partially explain their more assertive, direct communication patterns.

7.1.3. Gendered Language

He sat on the table – this is an example of language with gendered pronouns. There are actually three categories of language, as it relates to gender. There are gendered languages, natural gender languages, and genderless languages. *Gendered language*s are languages in which people, as well as objects, have a gender. These languages often assign a gender to non-living items. For example, in Spanish the word paper is masculine, and table is feminine. Examples of gendered languages are Spanish, Russian, German, and French. In gendered languages, gender is often "built into" the word which does not make adjusting the language for individuals that are transgender easy. *Natural gender language*s are language in which humans and animals are gendered, but non-human items and objects are not. English is an example of a natural gender language. Other examples include Norwegian and Swedish. Natural gender languages allow for additional pronouns such as ze/zir/zie/hir for individuals that do not identify as female or male, or prefer to be referred to with gender-neutral pronouns. Natural gender languages also allow for nonspecific pronouns such as "they" to avoid falsely gendering an individual as well. Unlike gendered languages, natural gender languages also can accommodate using words that do not require a pronoun such as student, partner, and employee, and avoids gendering all together. *Genderless language*s are languages in which no nouns are categorized. Examples of these languages include Chinese, Estonian, and Finnish.

So how does gendered versus nongendered language impact us? Does it impact us at all? Are there differences in equality in countries in which the predominant language is genderless versus gendered? Actually, there are differences noted, but it may be different than what you would initially assume. Research does indicate that language that has grammatical gender within it can shape interactions and perceptions. These perceptions may then lead to changes in our judgement, decisions, behaviors, and ideas which then may change how one is treated and one's status. Given this, one may assume that a country that has genderless language would have the most equality. This is actually not the case. What research has shown is, when gendered language (fully gendered, not natural gender language) is the predominant language, then there is less equality (e.g., considering economic factors despite controlling for any confounding factors such as governmental systems, religion, etc.) than natural gender and genderless language. However, natural gender language countries show higher equality than genderless language countries. Why is this? Well, research shows that gender neutral terms in genderless languages tend to be perceived with a male bias. Thus, genderless languages may actually lead to females missing opportunity to emphasize their role and visibility. Languages that allow for gender pronouns (natural gender languages) are hypothesized to promote more inclusion of women (Braun, 2001; Nissen, 2002). These languages also allow for gender-inclusive language, whereas gendered languages in which nearly everything is gendered are more difficult to implement neutral terms to promote gender inclusiveness (Prewitt-Freilino, Caswell, & Laakso, 2011).

7.2. Cognition

Section Learning Objectives

- Obtain basic knowledge of how cognitive development differs between males and females.
- Understand the differences in cognitive abilities between males and females.
- Recognize the perceived differences in cognitive abilities between genders.
- Learn about stereotype threats as it relates to gender and performance/outcomes.

7.2.1. Sex Differences in Cognitive Development

Cognitive development is the development of one's intellectual ability to solve problems, reason, and learn. Intellectual ability is spread across several areas and domains, including, but not limited to: memory, language, logic reasoning, math reasoning, processing speed, etc. There are various theories on cognitive development. Some theorize that cognitive development happens in a continuous, but gradual, way whereas others hypothesize it develops in stages. Some theorize that there is one single

trajectory path, whereas others hypothesize that there are multiple paths. Additionally, nativists theorize that cognition is largely influenced by nature (genes, biology) whereas environmentalists hypothesize that cognition is influenced more by nurture (Duffy, 2017).

So, do males and females develop similarly in their intellectual development? Although society perceives many differences, research shows that while there are some differences, there are actually more similarities than differences. Moreover, the differences typically are not large, and by adulthood, many of the slight differences even out (Duffy, 2017).

Let's talk about the actual sex differences. Research indicates that, in childhood and continuing into adulthood, males' brains are about 10% larger than females. This difference is maintained, even when researchers control for the fact that males, typically, are physically larger than females in all aspects. When going further into detail, studies have shown that the interstitial nuclei, which is largely responsible for sexual behavior, is larger and contains more cells in males than females. Interestingly, heterosexual men's interstitial nuclei is larger than homosexual men's. Another area of difference is with the amygdala. The amygdala is responsible for several functions, but the most prominent being emotion regulation and processing. In males, the amygdala grows during adolescence, but not in females,. This increase in size appears to persist, with research showing that even into adulthood, males have larger amygdala. Another area of structural difference is in the hippocampus. The hippocampus is largely responsible for memory. This area increases in females during adolescence, but does not show the same growth in males during adolescence. The caudate (an area in the basal ganglia responsible for procedural and associative learning as well as inhibitory control) is also larger in females (Grose-Fifer & diFilipo, 2017).

7.2.2. Sex Differences in Cognitive Abilities

7.2.2.1. Spatial abilities. Who performs better? Males are shown to perform better at a specific task – mental rotation. Mental rotation tasks are tasks in which an individual is shown variations of a stimuli that is rotated and must select the appropriate response. Males tend to outperform females in mental rotation tasks, especially when there are timed elements of the task (e.g., limited time to respond; time pressures). https://www.labvanced.com/content/research/en/blog/2024-05-3d-and-2d-mental-rotation-task/Differences in spatial abilities can be seen in as young as 3 months old (Quinn & Liben, 2008). Research has also shown that females that have had a higher exposure to androgens do better on these spatial tasks than females that have not had increased androgen exposure. As such, there appears to be some biological bases. However, some environmental components cannot be ignored. For example, boy toys/interests (e.g., video games, building blocks) tend to focus in more on visual-spatial abilities compared to girl toys/interests (Grose-Fifer & diFilipo, 2017).

How males and females solve problems, particularly mental rotation tasks, may vary. It appears that women tend to activate the frontal cortex area more whereas as males engage in a more automatic process. As such, females approach the tasks with a more analytical approach. Different areas of the brain being utilized, depending on sex, is found even when males and females perform similarly on a task. As such, even when males and females have similar abilities, how they solve problems may be different (Grose-Fifer & diFilipo, 2017).

7.2.2.2. Verbal-based abilities. Females tend to outperform males in verbal fluency tasks. However, this difference is relatively small – smaller than the differences found in mental rotation tasks. There is not a found difference in the size of vocabulary between sexes; rather, it appears that girls have an increased ability to produce that vocabulary when a timed element is in play. Moreover, the advantage females have in verbal fluency early on begins to fade away around the age of six years old. (Grose-Fifer & diFilipo, 2017).

Somewhat relatedly, males (children and adults) have poorer handwriting and struggle more to compose complex written language compared to females. Again, although males are not as quick and accurate in reading, their actual core reading capacity and abilities are equal to females (Berniger, Nielsen, Abbott, Wijsman, & Raskind, 2008).

7.2.2.3. Math abilities. Abilities in mathematics do not appear to differ between males and females. Despite previous theories that have attempted to explain why males may have an advantage in mathematics, research simply fails to consistently support this. Males are not equipped with an innate advantage to outperform females in mathematics or science (Spelke, 2005). Although males tend to major in mathematics/sciences in college, and pursue more math-based careers, this does not seem to be due to a genuine cognitive advantage in this skillset. It is theorized that there may be more sociological reasons for this (as you will soon find out; Spelke, 2005).



7.2.3. Stereotype Threat

What if you were told before you went into a job interview, you were not at all qualified and would never get the job? What if you were told that most girls can't get into STEM programs, just before you filled out your application for a STEM program (assuming you are a girl)? Do you think this would impact your performance on the interview or how you filled out your application? This is the idea of a stereotype threat. Essentially, a stereotype threat is when (1) a person is a member of the group being stereotyped, (2) in a situation in which the stereotype is relevant (a female taking a math test), and (3) the person is engaging in an activity that can be judged/evaluated (Betz, Ramsey, & Sekaquaptewa, 2014).

Claude Steele is one of the main researchers in stereotype threat. He began his work in this area focusing on stereotype threat for African American and minority students in the university setting. He began to notice racial minorities and women underperformed academically, despite standardized testing that revealed these populations were capable of achieving equivalently to their white, male peers. He hypothesized that simply knowing about a stereotype (e.g., women aren't as good at math, racial minorities are not high achieving, etc.) could hinder performance. In groundbreaking research, he revealed his hypothesis to be true (Steele & Aronson, 1995). In this study, Steel and Aronson (1995) conducted a series of mini-studies in which they manipulated the presence of a stereotype threat, the context of testing, etc. For example, one of their mini-studies consisted of having Black and White college students take a GRE. In one condition, the participants were told it would be diagnostic of their intellectual capacities whereas in another condition, participants were told the test was simply a problem-solving task that did not directly relate to intellectual ability. They conducted four different mini-studies that manipulated factors such as the ones described above. Some of the results of their study indicated that if Black participants were expecting a difficult, ability/diagnostic test, Black participants tended to be more aware of stereotypes, have increased concerns about their ability, show reluctance to have their racial identity somehow linked to performance, and even begin to make excuses for their performance. In general, the cumulation of findings from these mini-studies indicated that African American participants' performance on standardized testing was negatively impacted (i.e., performed lower) when reminders of negative stereotypes of their abilities were strong. Likewise, when those conditions were removed, their standardized performance improved. Thus, their study provided significant support for stereotype threat (Steele & Aronson, 1995).

Think about this, his research showed that it wasn't that African American and other minority groups had a lower, innate ability (biology), and it wasn't that they were less motivated, or that instructors were harsher toward them/their grading, it was knowledge about a stereotype about them regarding ability and performance that contributed to their lower performance (Betz, Ramsey, & Sekaquaptewa, 2014). Spencer, Steele and Quinn (1999) expanded this research from racial minorities to women, particularly as it relates to math performance. Similar to Steele and Aronson's 1995 study, Spencer, Steele, and Quinn (1995) conducted several mini-studies to manipulate factors and presence of stereotype threat. For example, one of the studies consisted of administering GRE math problems. In one condition, participants were told that gender differences had been found in the test whereas in the other condition, participants were told that there had not been a gender difference found in the test. The overall results of the study showed that when women experienced stereotype threat, their performance was hindered (Spencer, Steele, & Quinn, 1999).

This does not mean that someone believes they are actually worse at math, etc. It does not mean that they have internalized that

stereotype and now believe it to be true about themselves. Not believing the stereotype, but being aware that *others* believe it, is enough to create a stereotype threat outcome (Huguet & Regner, 2007; Wheeler & Petty, 2001).

7.2.3.1. Stereotype threat in school. As you may have gathered from the description of Spencer, Steele, and Quinn's 1999 study, girls frequently experience stereotyped threats in school. It appears that around ages 7 to 8, gender stereotype awareness emerges (i.e., 5 to 7-year-old females were unaware, but 8 to 9-year-old females were aware whereas 5 to 7-year-old boys were aware of the stereotype regarding math abilities in girls; as cited in Galdi, Cadinu, & Tomasetto, 2014). Research has shown that females preform worse in math when under stereotype threat, but perform equivalently to males when the threat is removed. Stereotype threats have shown to reduce test performance, but these threats can also impact a female's ability to incorporate and receive helpful feedback if they are overly focused and worried about providing confirmation of negative stereotypes. For example, if a female is overly worried about behavior or performing in such a way so as not to confirm a negative stereotype (e.g., women are bad in math), when someone, such as a teacher give constructive feedback or corrections, the female may be more reactive or defensive, and thus, unable to incorporate the helpful feedback that is being provided. When overly worried about confirming negative stereotypes, individuals may also pull away and avoid class discussions at school, etc. (Betz, Ramsey, & Sekaquaptewa, 2014).

Gender stereotype threats may be more of an issue when a female's identity is strongly rooted in being a female (versus their identity being strongly rooted in another area that is not negatively stereotyped). This is actually true for many stereotype threats, not just gender related threats. Essentially, if an individual sees their gender (or insert other negatively stereotyped group) as a major part of their identity, and the individual is highly focused on doing well in an area that is negatively stereotyped (for example, a female wanting to be an engineer), they may experience increased negative impacts from gender stereotype threats. This is even stronger when an individual strongly identifies with multiple groups that experience stereotype threats (e.g., a black woman; Bouche & Rydell, 2017).

But why does the stereotype threat impact test performance? There are various theories, but one of the most commonly accepted is that by Toni Schmader. He theorized that when one is overly worried about a stereotype threat (e.g., reminded that because she belongs to the female group, she is likely to do poorly on the math test she is about to take), the worry ties up valuable cognitive resources. This worrying then impacts the capacity that one has to draw on their memory and to attend and focus on the task before them. As such, they are unable to utilize their abilities to their fullest and focus fully, impacting task performance. Research has shown that stereotype threats do not just impact test performance, it also impacts an individual's ability to learn. This has been specifically shown to be true for females when learning perceptual tasks (Boucher, Rydell, Van Loo, & Rydell, 2012; Rydell, Shiffrin, Boucher, Van Loo, Rydell, 2010).

However, some have argued against the actual validity of the idea of stereotype threats. Early on, a common argument was that most of these studies were conducted in labs and not natural settings, and thus, could not be generalized. Some researchers, such as Paul Sackett, believed that there would be a small effect in a natural setting. This began to spark an interest in conducing more natural setting studies. Naturalistic research has confirmed that stereotype threats indeed have negative impacts on academic experiences, performance, and career goals. Moreover, these negative impacts are accumulating.

Other psychologists have argued that factors such as socialization, discrimination, and poverty stereotype threats do not explain everything. While these individuals are right, stereotype threats are found to be significant and important components. For example, when demographic surveys are moved from the beginning of an exam to the end of an exam, test performances were different. Specifically, researchers moved that moving a demographic study to the end of an AP calculus exam led to an increase in the number of female students that achieved exam scores high enough to receive college credit. This wasn't small either – it increased to more than 47,000 females getting this passing score, per year (Stricker & Ward, 2004)!

The above study is an example of what can be done to reduce the impacts of stereotype threats. Small logistical changes may have sizable impacts. Other strategies such as reframing tests as puzzles that need to be solved or framing critiques as opportunities for one to grow and learn may be helpful ways to reduce the impact of stereotype threats. Helping individuals learn to cope with concerns of stereotype threats and to use self-affirming statements may also be beneficial. Moreover, simply teaching individuals more about stereotype threat may be beneficial. Finally, having increased same-sex role models and higher rations of females represented in a class may be helpful (this is true for stereotype threats in general. For example, same-race role models and representation of same-race individuals may reduce race-related stereotype threat impacts; Boucher & Rydell, 2017).

The number of cues in a class that remind an individual of a gender stereotype may be able to be reduce and lead to positive impacts. For example, as mentioned above, if there are few female classmates or teachers, increasing this can be helpful. Also, if patterns of who sits where or who is more frequently called upon is present, it may be helpful to reduce this. Additionally, if only one gender's accomplishments are discussed or one gender's interests are overly displayed in the classroom (e.g., classroom

decorations strongly geared to males), efforts to reduce this could prove beneficial.

Module Recap

In this module, we learned about the actual and perceived differences in cognitive development and functioning in males and females. We gained knowledge about the differences in how men and women communicate. We also learned about how language impacts our understanding of gender and how our audience and status may impact how we communicate as well. We learned about differences in cognitive abilities between males and females. We discussed how there are very few differences in abilities, when truly looking at cognitive abilities. We also discussed how perceived differences impact the development of stereotypes that then lead to the presence of stereotype threats. We discovered how impactful these threats can be.

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3.3: Module 8 – Gender Through a Physiological Psychology Lens

Module 8: Gender Through a Physiological Psychology Lens

Module Overview

We often hear of books such as “Men are from Mars and Women are from Venus” and “Men Are Like Waffles- Women Are Like Spaghetti: Understanding and Delighting in Your Difference” which suggest that men and women are opposites. While there is some disagreement as to how similar and different men and women truly are, the purpose of this module is to examine the biological differences in observed cognition, behavior, and gender roles with regards to one’s genes, hormones, and structure/function of the brain. We know that an individual’s genetic make-up, the production (or lack thereof) of hormones, as well as their brain anatomy can drastically impact their behavior. Therefore, the goal of this module is to explore the differences between men and women through a physiological psychology lens.

Module Outline

- 8.1. Basic Building Blocks
- 8.2. Endocrine System
- 8.3. Hormones
- 8.4. The Brain

Module Learning Outcomes

- To understand the relationship between DNA, genes, and chromosomes
- To gain a better understanding of the most common chromosomal abnormalities
- To better understand how the endocrine system functions and how the production of (or lack thereof) hormones impact ones social, cognitive, and behavioral development
- To understand gender differences in brain function and how this might impact differences in behavior

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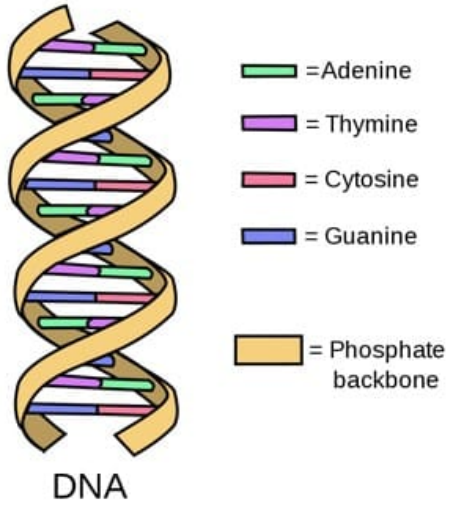
8.1. Basic Building Blocks

Section Learning Objectives

- To identify how genetic information is transferred from generation to generation
- To gain a better knowledge of both sex and non-sex linked chromosomal abnormalities

8.1.1. DNA

DNA, or deoxyribonucleic acid, is the most basic hereditary material in humans and most other organisms. Nearly every cell in your body (usually in the nucleus of the cell) contains some DNA which is comprised of four chemical bases: **adenine** (A), **guanine** (G), **cytosine** (C), and **thymine** (T). Each DNA base attaches to each other- A with T and C with G; these attached bases form **base pairs**. The backbone of DNA is comprised of a sugar and a phosphate molecule. One base pair along with its backbone form what is called a **nucleotide**. The nucleotides form two long strands that twist in a ladder-like structure forming a **double helix** (National Institute of Health, 2019).



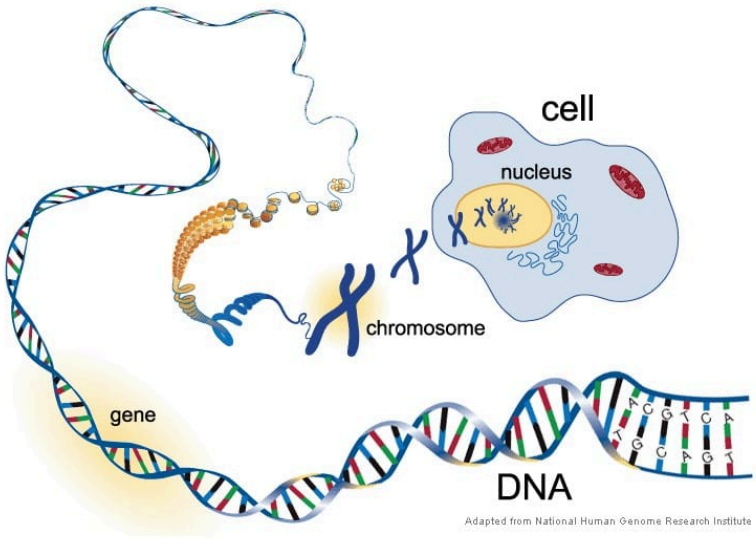
Chromosomes

8.1.2. Genes

While DNA neatly packages the hereditary material, **genes** are the basic physical and functional unit of heredity (National Institute of Health, 2019). DNA within each human gene varies from a few hundred DNA bases to more than 2 million bases! While most genes are the same among all individuals, there are a small number of genes (roughly 1%) that differ; these small differences are what make us all unique (National Institute of Health, 2019). Given the large number of DNA bases within a gene, you can imagine that "mistakes" or changes can occur. While some of these changes do not affect the individual, some can have catastrophic consequences. We will discuss this in more detail in section 8.1.3.1.

8.1.3 Chromosomes

We've already discussed that base pairs and a sugar/phosphate backbone create nucleotides. Several nucleotides form together to create DNA. Thousands to millions of DNA sequences create a gene. Hundreds to thousands of genes are packaged into **chromosomes** which are thread-like structures located inside the nucleus of a cell (National Institute of Health, 2019).



In humans, every cell should contain 23 pairs of chromosomes for a total of 46. Twenty-two of these pairs of chromosomes are

autosomes, and one pair of chromosomes is an **allosome**. The 22 pairs of autosomes are (essentially) the same in males and females, however, the allosome, also known as the sex-chromosome, differs between males and females. Thus, this chromosome determines whether a fetus becomes genetically a male or female.

How does this happen? Males have one X chromosome and one Y chromosome, whereas females have TWO X chromosomes. The Y chromosome in males carries the genes that determine male sex. While other cells are produced by **mitosis**, **gametes,** or sex cells, are produced by **meiosis** cell division which results in the cells having only half of the number of chromosomes as the parent (National Institute of Health, 2019). Therefore, when the chromosomes split during meiosis, the two female cells each contain one X chromosome; however, when the male chromosomes split, one cell contains an X chromosome and the other contains a Y chromosome. Seeing as the Y chromosome contains the genetic information for the male sex, the sex of the fetus is determined by the male (father).

8.1.3.1. Chromosomal abnormalities. Chromosomal abnormalities occur when there is an anomaly, aberration, or mutation of chromosomal DNA (Genetic Alliance, 2009). This can occur during either egg/sperm development or during the early development of fetus. There are two ways in which these abnormalities can occur: numerical or structural. A numerical abnormality occurs when a whole chromosome is either missing OR an extra chromosome is attached to the pair. A structural abnormality occurs when *part* of an individual chromosome is missing, extra, or switched to another chromosome (Genetic Alliance, 2009). The range of effects of chromosomal abnormalities vary depending on the specific abnormality, with some as minimal as developmental delays to as severe as inability to sustain life.

We will now briefly discuss a few of the most common chromosomal abnormalities. While the first two chromosomal abnormalities are not sex-linked abnormalities, they are the most commonly observed, and therefore, worth mentioning. The final two chromosomal abnormalities are sex-linked and therefore, occur within specific genders.

Down syndrome (Trisomy 21). Down syndrome occurs when there is an extra chromosome on chromosome pair 21, hence the term trisomy 21. Trisomy 21 is the most common chromosomal condition in the United States and occurs in roughly 1 out of every 700 babies and generally effects males and females equally (Parker et al., 2010). Individuals with Down syndrome have distinct physical characteristics that include: flattened face, small head, short neck, protruding tongue, upward slanting eyelids, poor muscle tone, excessive flexibility, and shortened stature (National Library of Medicine, 2019). In addition, individuals with Down syndrome are more susceptible to congenital heart defects, gastrointestinal defects, sleep apnea, and dementia- with symptoms appearing around age 50. The lifespans of individuals with Down syndrome have increased dramatically over the years, with an average life expectancy of 60 years (National Library of Medicine, 2019).

The effects of the extra chromosome range from moderate to severe. Intellectual and developmental difficulties rage from mild to severe, however, research routinely supports the effectiveness of early intervention programs involvement in reduced developmental issues. Similarly, delayed developmental milestones are also common, usually related to low muscle tone. Early interventions with occupational, physical and speech therapists have been shown to reduce delay in both physical and speech development (National Library of Medicine, 2019).

While researchers are still unclear why this chromosomal abnormality occurs, advanced maternal age is one commonly identified risk factor for having a child with Down syndrome as the risk of conceiving a child with Down syndrome increases after 35 years of age. With that said, most children with Down syndrome are born to women under 35 years of age as there are more women having children prior to age 35 (National Library of Medicine, 2019).

Trisomy 18 (Edwards syndrome). Trisomy 18 occurs when there is a third chromosome on chromosome 18. A Trisomy 18 error occurs in about 1 out of every 2500 pregnancies in the US and 1 in 6000 live births (National Library of Medicine, 2019). The number of total births is higher because it includes a significant number of stillbirths that occur in the 2nd and 3rd trimesters of pregnancy.

Individuals with Trisomy 18 have significant medical complications that are potentially life-threatening, which is why this chromosomal abnormality has a high mortality rate. In fact, only 50% of babies that are carried to term will be born alive (National Library of Medicine, 2019). The birth rate is higher in baby girls than baby boys; baby girls also out-perform baby boys in the neonatal intensive care unit (NICU). Those born alive have a low birth rate due to slowed intrauterine growth. Physical abnormalities such as a small, abnormally shaped head, small jaw and mouth, clenched fists with overlapping fingers, as well as many other organ abnormalities are common in individuals with Trisomy 18 (Trisomy18 Foundation, 2019). Due to the severity of these abnormalities, only 5-10% of live births live to their first birthday. There have been rare cases of individuals with Trisomy 18 living into their twenties, however, they are unable to live independently without full time caregiving due to their significant developmental delays (Trisomy18 Foundation, 2019).

Klinefelter syndrome. Klinefelter syndrome is a rare sex chromosome disorder in males that occurs from the presence of an extra X chromosome. Individuals with Klinefelter syndrome have the normal XY chromosomes, plus an extra X chromosome for a total of 47 Chromosomes (XXY; National Library of Medicine, 2019). It is believed that the activity from the extra copy of multiple genes on the X chromosome disrupt many aspects of development from sexual development to developmental and physical development.

Occurring in about 1 in 650 newborn boys, Klinefelter syndrome is among the most common sex chromosome disorders. Symptoms can be so mild that the condition is not diagnosed until puberty or adulthood. In fact, researchers believe that up to 75% of affected individuals are never diagnosed (National Library of Medicine, 2019).

Individuals with Klinefelter syndrome typically have small testes that produce a reduced amount of testosterone. Because of the reduced hormone production, individuals with Klinefelter syndrome may have delayed or incomplete puberty, thus causing infertility. Unless treated with hormone replacement, the lack of testosterone can lead to breast enlargement, decreased muscle mass, decreased bone density, and a reduced amount of facial and body hair (National Library of Medicine, 2019).

Developmentally, individuals with Klinefelter syndrome often have learning disabilities, particularly with speech and language development. With that said, receptive language skills appear to supersede expressive language skills thus individuals with Klinefelter syndrome will understand speech but have difficulty communicating and expressing themselves (National Library of Medicine, 2019). Due to this language disruption, individuals with Klinefelter syndrome also often have difficulty learning to read.

While there are additional physical characteristics associated with Klinefelter syndrome, they are subtle. As adolescents and adults, these individuals may be taller than their peers. Children may have low muscle tone and problems with motor development such as sitting, standing, walking (National Library of Medicine, 2019). Similar to individuals with Down syndrome, early intervention programs are helpful in reducing the delay of motor development.

Psychiatrically, individuals with Klinefelter syndrome often experience anxiety, depression, and impaired social skills. There is a higher rate of ADHD and Autism Spectrum Disorder than that of the general public. Medically, they also experience complications related to metabolic issues (National Library of Medicine, 2019). More specifically half of men with Klinefelter syndrome develop conditions such as type 2 diabetes, hypertension (high blood pressure), and high cholesterol. They are also at an increased risk for developing osteoporosis, breast cancer, and autoimmune disorders compared to unaffected men (National Library of Medicine, 2019).

Turner syndrome. Unlike Klinefelter syndrome where there is an additional X chromosome, Turner syndrome occurs when there is one normal X chromosome and the other sex chromosome is missing or altered. Due to the altered X chromosome and lack of Y chromosome, individuals with Turner syndrome are genetically female. Turner syndrome is equally as rare as Klinefelter syndrome and occurs in about 1 in 2,500 newborn girls (National Library of Medicine, 2019).

Due to the altered or absence of the 2nd X chromosome, girls with Turner syndrome have a short stature which becomes apparent in early elementary years. Additional physical characteristics include low hairline at back of the neck, swelling of hands and feet, skeletal abnormalities, and kidney problems. Additionally, one third to half of girls born with Turner syndrome are born with a heart defect (National Library of Medicine, 2019).

Early developmental problems in girls with Turner syndrome vary significantly, with some experiencing developmental delays, nonverbal learning disabilities, and behavioral problems and others not requiring any early intervention. Despite these early developmental issues, girls and women with Turner syndrome typically have normal intelligence (National Library of Medicine, 2019).

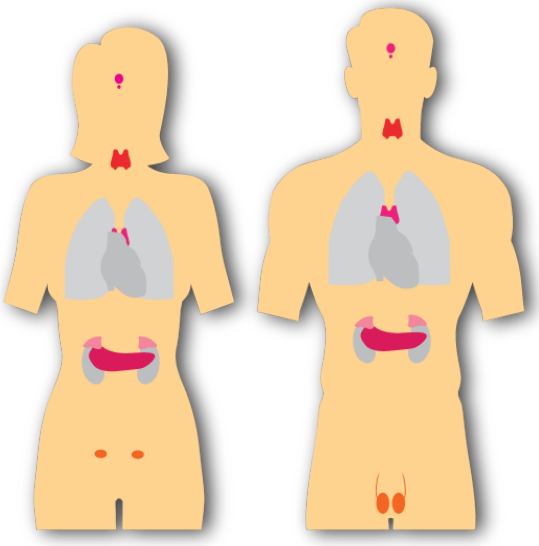
Due to the altered sex chromosomes, women with Turner syndrome often experience early loss of ovarian function. While early prenatal development of ovaries is normal, egg cells die prematurely and majority of ovarian tissue degenerates before birth (National Library of Medicine, 2019). Due to ovarian loss, many affected girls do not undergo puberty unless they undergo hormone replacement therapy. Even with the hormone treatment, most women with Turner syndrome are unable to conceive children.

8.2. Endocrine System

Section Learning Objectives

- To identify the key organs involved in the endocrine system
- To understand the function of the endocrine system

- To understand why the endocrine system is important in behavior



8.2.1. Anatomy and Function

The endocrine system is made up of a network of glands that secrete hormones into the circulatory system that are then carried to specific organs (Tortora & Derrickson, 2012). While there are many glands that make up the endocrine system, it is often helpful to organize them by location. The **hypothalamus**, **pituitary gland**, and the **pineal gland** are in the brain; the **thyroid** and **parathyroid** glands are in the neck; the **thymus** is between the lungs; the **adrenal glands** are on top of the kidneys; and the **pancreas** is behind the stomach. Finally, the **ovaries** (for women) or **testes** (for men) are located in the pelvic region.

While all of the organs are important, there are two main organs that are responsible for the execution of the entire system: the hypothalamus and the pituitary gland. The hypothalamus is important because it connects the endocrine system to the nervous system. Its main job is to keep the body in **homeostasis**, or a balanced body state (Johnstone et al., 2014). When the body is out of balance, it is the hypothalamus' job to identify the need (i.e. food to increase energy, water to increase hydration, etc.), and through the pituitary gland, identify how to achieve balance once again.

The pituitary gland is the endocrine system's master gland. Through the help of the hypothalamus and the brain, the pituitary gland secretes hormones into the blood stream which "transmits information" to distant cells, regulating their activity (Johnstone et al., 2014). Non sex-related hormones that are released from the pituitary gland include: **Growth hormone** (GH), the hormone that stimulates growth in childhood and impacts healthy muscles and bones; **Adrenocorticotropin** (ACTH), the hormone responsible for production of cortisol which is activated in a stress response, and **Thyroid-Stimulating hormone** (TSH), the hormone responsible for regulating the body's metabolism, energy balance, and growth. The pituitary gland also produces sex-related hormones that are involved in reproduction. For example, the pituitary gland is responsible for producing **prolactin** and **oxytocin**, which are both implicated in milk production for new mothers. Oxytocin may also play an important role in bonding between mother and child. Additional hormones including **Luteinizing hormone** (LH), which stimulates testosterone production in men and ovulation in women and **Follicle-Stimulating hormone** (FSH), which promotes sperm production in men and develops eggs in women are also maintained by the pituitary gland. LH and FSH work together to produce normal function of ovaries and testes. Deficits in any of these hormones may impact one's reproductive ability.

Under the control of the hypothalamus and the pituitary gland, the remaining glands are responsible for manufacturing specific hormones that are carried throughout the body and help carry out specific functions. While it is beyond the scope of this course to identify all of the hormones and functions of the endocrine system, it is important to identify the five main functions of the endocrine system (Johnstone et al., 2014):

1. Maintain homeostasis through the regulation of nutrient metabolism, water, and electrolyte balance.
2. Regulate growth and production of cells.
3. Control the responses of the body to external stimuli, especially stress.
4. Control reproduction.

5. Control and integrate circulatory and digestive activities with the autonomic nervous system.

8.2.2 Hypothalamus-pituitary-adrenal (HPA) Axis

As mentioned above, the endocrine system is involved in a lot of different body functions, however, one of the most important aspects of the endocrine system with regards to psychology is the HPA Axis. The HPA axis connects the central nervous system (brain and spinal cord) to the hormonal system. While there are many functions of this system, the most important (for this text purpose) is the stress-response system.

When in stress, the hypothalamus releases **corticotropin-releasing hormone** (CRH). CRH then activates the pituitary gland to release **adrenocorticotropic hormone** (ACTH). ACTH travels down to the adrenal gland on top of the kidneys which initiates the secretion of glucocorticoids from the adrenal cortex. The most common type of glucocorticoid in humans is **cortisol**, which plays a critical role in providing energy when presented with stressful or threatening situations (Kudielka & Kirschbaum, 2005). The elevated levels of cortisol produce a negative feedback loop, signaling brain functions to shut off the stress response system. A good video showing this response system can be found here https://www.neuroscientificallychallenged.com/glossary/hpa-axis(opens in new window).

As you will see more in other modules, particularly Module 10 when discussing clinical disorders, the HPA axis is responsible for keeping the body at homeostasis during stressful situations. A dysfunctional HPA axis has been associated with psychosomatic and mental health disorders. More specifically, HPA *hyper*activity (i.e. too much activity) has been linked to major depression, whereas *hypo*activity (i.e. too little activity) is associated with a host of autoimmune disorders, as well as fibromyalgia and chronic fatigue syndrome (Kudielka & Kirschbaum, 2005). Chronic HPA axis dysregulation has also been associated with the development of mood and anxiety disorders that will be discussed in more detail in Module 10.

8.2.2.1. Gender Differences in HPA Axis. Studies exploring the HPA axis hormonal response to stress among men and women have yielded conflicting findings. Kirschbaum and colleagues (1995a, b) identified higher cortisol and ACTH responses in men than women. Additional studies also found that men yielded greater cortisol and ACTH response to a psychological challenge (i.e. public speaking) than women. With that said, other studies have reported no significant gender differences in response to stress.

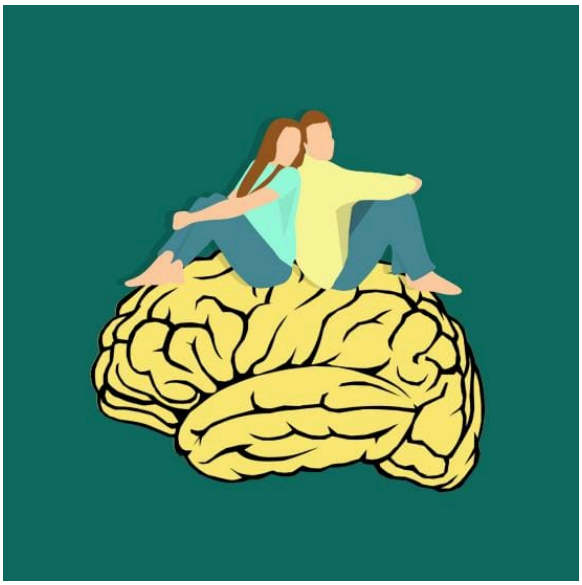
Some studies have indicated that a women's menstrual cycle may be implicated in gender differences among activation of the HPA axis. For example, Kirschbaum and colleagues (1999) showed that free cortisol responses were similar between men and women in the luteal phase of their menstrual cycle, however, women in the follicular phase or those taking oral contraceptives showed less free cortisol compared to males. While there appears to be some biological differences in men and women's activation of the HPA axis, one cannot rule out other factors such as cognitive appraisals that may also implicate individual differences in the stress response. These additional factors will be discussed in more detail in Module 10.

8.3. Hormones

Section Learning Objectives

- To understand the difference between estrogen and androgens
- To define and describe intersex conditions
- To identify the effect hormones have on social behavior and cognition
- To define and describe complete androgen insensitivity syndrome

The word *hormone* is derived from the Greek word meaning "arouse to activity." Hormones are the body's "chemical messengers." Produced via the endocrine system, hormones travel throughout one's bloodstream helping tissues and organs carry out their respected functions. Because there are so many types of hormones, they are often categorized by their function such as: reproduction/sexual differentiation; development and growth, maintenance of the internal environment, and regulation of metabolism/nutrient supply (Nussey & Whitehead, 2001). It should be noted that although hormones are categorized into these main groups, there are many hormones that affect more than one of these functions, and thus, serve multiple purposes.



8.3.1. Estrogens vs. Androgens

There are two classes of sex-related hormones: **estrogens** and **androgens.** Estrogens are hormones associated with female reproduction whereas androgens (i.e. testosterone) are associated with male reproduction. These hormones are not mutually exclusive, therefore, both males and females have *both* estrogen and androgens in their bloodstream—the difference is the *amount* of each hormone in each gender. For example, females have higher amounts of estrogen and lower amounts of androgens; males have higher amounts of androgens and lower amounts of estrogen.

Occasionally, there can be a disruption in hormone production causing an excess or reduction of hormone level. This disruption can lead to changes in the brain as well as physical changes. This can be especially problematic in sex-linked hormones as it can alter the production of both **primary** and **secondary sexual characteristics** depending on when the hormone imbalance occurs.

Primary sexual characteristics include sex organs that are needed for sexual reproduction. Secondary sexual characteristics are features that present during puberty and imply sexual maturation. Physical characteristics such as developing breasts, increased pubic hair, facial hair, widening of hips (women) and deepening of voice (males) are among of the most common secondary sexual characteristics. Due to hormonal disruption, occasionally there are situations where there is a discrepancy between one's chromosomal sex and **phenotypical sex** (or external genitals). Known as **intersex conditions**, these situations have allowed researchers to study the effects of hormones on various behaviors.

8.3.2. Hormone Disorders

As previously discussed, occasionally there is a disruption in hormone production. This is seen in many medical disorders such as hyperthyroidism, dwarfism, and Cushing's syndrome to name a few; however, sometimes there is a disruption in sex-related hormones. Below we will discuss the two most common types of conditions where sex-related hormones are affected and assess the implications of these disorders.

8.3.2.1. Congenital adrenal hyperplasia. One of the most common types of intersex conditions is **Congenital Adrenal Hyperplasia (CAH)**. CAH is a genetic disorder that affects the adrenal glands and the production of hormones. More specifically, individuals with CAH have a significant enzyme deficiency that results in impaired synthesis of cortisol and aldosterone. The consistently low levels of cortisol results in an increase of ACTH by the pituitary gland which in response, causes an increase in synthesis of steroid precursors resulting in high androgen levels. While the hormonal effects of CAH can be of varying degrees, the most common, also known as Classic CAH, results in a complete lack of cortisol and an overproduction of androgens.

An individual with classic CAH will experience symptoms related to too little sodium in the body such as dehydration, poor feeding, low blood pressure, heart rate problems, and low blood sugar at birth (Mayoclinic, 2019). Due to the extensive nature of these symptoms, they are generally detected days or weeks within birth. In addition to the low cortisol related symptoms, individuals also experience effects related to high levels of androgens. Newborn females may present with ambiguous external genitalia despite having normal internal reproductive organs, whereas newborn males often have enlarged genitalia (Mayoclinic, 2019).

Individuals with classic CAH will also experience significantly early onset of puberty—females may fail to menstruate or have irregular menstrual periods. Infertility in both males and females is also common.

Congenital Adrenal Hyperplasia has allowed researchers to study the effects of excess sex hormones on individual's behaviors. While studied more extensively in females due to the fact that women do not usually develop high levels of androgens, findings suggest that prenatal exposure to excess androgen may influence the development of regions in the brain responsible for sex difference behaviors (Dittman et al., 1990). For example, some studies have found higher levels of energy and aggressive behaviors, an increase participation in sports, and an increased interest in traditionally masculine games and behaviors in girls with CAH (Berenbaum & Hines, 1992; Berenbaum & Snyder, 1995; Berenbaum, 1999).

These findings have been replicated over the years with CAH females routinely displaying more male-typical play behaviors in childhood. Assessment of CAH females as they age into adulthood also suggest differences in sexual identity. More specifically, CAH females report less satisfaction with their female sex assignment as well as less heterosexual interest than unaffected women. When assessing the relationship between childhood play and adult sexual preference in CAH females, a significant relationship was observed between increased male-typical play in childhood and decreased satisfaction with the female gender. These findings were also found between increased male-typical play in childhood and reduced heterosexual interest in adulthood (Hines, Brook, & Conway, 2004). Studies assessing behavior and sexual orientation in males with CAH have failed to identify any significant differences between males with CAH and unaffected males. These results are not surprising given the fact that unaffected males have higher levels of androgens than unaffected females.

8.3.2.2.Complete androgen insensitivity syndrome. Unlike CAH where there is an overproduction of androgens, **Complete Androgen Insensitivity Syndrome** (CAIS) is a rare condition that inhibits boys from responding to androgens. Occurring in approximately 2-5 per 100,000 births, individuals with CAIS are genetically male (XY), however, due to the body's inability to respond to androgens, they display mostly female external sex characteristics. Despite the external female sex characteristics, these individuals are still genetically male and therefore, lack a uterus but do have undescended testes. While genetic testing in fetuses has expanded over the years, many individuals with CAIS are not diagnosed until menses fail to develop at puberty. While gender identity issues are likely, individuals with this syndrome are often raised female due to the external sexual characteristics at birth.

Physically, individuals with CAIS are generally taller than women without the disorder, but shorter than males. It is believed that part of this increased height is due to the effect of the growth controlling region on the long arm of the Y chromosome. There is little research on the psychological gender development of individuals with CAIS, however, the limited information available suggests that individuals with CAIS usually assume a gender identity and sexual orientation in line with their female sex rearing (Wisniewski et al., 2000). Individuals with CAIS report maternal interests and report high femininity from childhood to adulthood on global rating scales (Wisniewski et al., 2000). Psychologically, individuals with CAIS report similar levels of psychological well-being and overall quality of life as unaffected women. Similarly, there were no differences in psychological and behavioral domains suggesting CAIS women and unaffected women experience similar levels of psychological and behavioral symptoms (Hines, Ahmed, & Hughes, 2003).

8.3.3. Effects of Hormones on Behavior

We just briefly discussed how an atypical hormone levels via hormone disorders can have an effect on behavior, but what about the effect of typically producing hormones on men and women's behaviors? Let's take a look at how estrogen and testosterone can impact the way we behave!

8.3.3.1 Estrogen. Changing levels of estrogen across the reproductive lifespan have been associated with changes in incidence of anxiety in women. More specifically, women are more at risk for developing an anxiety disorder during onset of puberty, which is also associated with an increase of circulating estradiol from prepubertal to adult levels (Ojeda & Bilger, 2000). Furthermore, an increase in anxiety symptoms is also observed when estradiol levels drop post-menopause (Sahingoz, Ugus, & Gezginc, 2011). In women with anxiety disorders, there is an increase in anxiety symptoms during the luteal phase of the menstrual cycle, which is characterized by a dramatic decline in circulating estradiol levels (Cameron, Kuttesch, McPhee, & Curtis, 1988). Therefore, there appears to be a strong link between anxiety related behaviors and estradiol levels in women.

With the strong link between estrogen and anxiety related disorders, some argue that use of estrogen in treatment of these symptoms would be beneficial. Unfortunately, research exploring the use of various levels of estrogen to manage anxiety symptoms in rats has yielded conflicting evidence, thus has not been explored in humans (Kastenberger, Lutsch, & Schwarzer, 2012).

8.3.3.2. Testosterone. While estrogen has been linked to increased anxiety type behaviors, testosterone has most commonly been linked to aggression. Popular opinion suggests that testosterone is responsible for aggressive, violent, and other machismo behaviors, however, research suggests there is actually little empirical support for these assumptions (Booth, et al., 2006). In fact, this relationship is best explained by a bi-directional relationship that is dependent on many different intrinsic individual factors (Sapolsky, 1997). More specifically, it is assumed that testosterone increases the likelihood that certain (aggressive) behaviors will be expressed, *if* the individual's intrinsic factors as well as the social contextual demands support the expression of this behavior (Booth et al., 2006). Therefore, testosterone alone is not responsible for aggressive behaviors, however, it may contribute to aggressive acts if other personal characteristics and environmental factors simultaneously occur.

A large meta-analysis indicated a weak positive relationship between testosterone and aggression suggesting individuals with higher levels of testosterone engage in more aggressive behaviors (Book, Starzyk & Quinsey, 2001). Interestingly, the largest effect in their findings was in males age 13-20 years of age. One possible explanation of increased aggressive behaviors during this age is a combination of increased testosterone due to puberty, in combination with increased impulsivity due to lack of prefrontal cortex development (Terburg, Morgan & van Honk, 2009). Furthermore, findings indicated that the most aggressive behaviors were related to a combination of high testosterone and low cortisol (Terburg, Morgan & van Honk, 2009). Low cortisol levels have long been implicated in aggressive and externalizing behavioral disorders.

Not surprisingly, aggressive behaviors have been examined in male prisoners. Findings routinely support the relationship between increased testosterone and more aggressive offenses (Dabbs et al., 1995). More specifically, testosterone levels are higher among men who committed personal crimes of sex and violence than those who committed property crimes of burglary, theft, or drugs (Dabbs et al., 1995). Furthermore, individuals with higher levels of testosterone were also more likely to have violated prison rules during their time served than their peers with lower levels of testosterone.

While there appears to be a relationship between testosterone and aggressive behavior, it is difficult to imply a causal role in aggression. Therefore, we must identify other possible explanations. Competitiveness of a situation is one variable researchers have explored. In examining aggressive behaviors during competitive video gaming, researchers found men made higher unprovoked attacks during the game than women. Furthermore, individuals with higher levels of testosterone also completed higher unprovoked attacks than those with lower levels of testosterone. From these findings, researchers imply that situational factors such as a threat to status or competition must interact with hormones to produce aggressive behaviors (McAndrew, 2009).

Another possible explanation for the sex-difference in aggressive behaviors is emotional arousal. More specifically, males are more easily aroused than females and more importantly, are often less able to regulate their emotions (Knight et al., 2002). This theory is supported by research identifying no sex differences in aggressive behaviors when arousal was zero, a large sex difference in small to medium arousal levels, and again no difference when there was high arousal (Campbell, 2006). Researchers assumed the sex-difference in aggressive behaviors at small and medium arousal levels was due in large part to impulsivity, with men being more impulsive than women.

8.3.4. Effects of Hormones on Cognition

Sex hormones influence cognition at many stages of life, however, the focus of most of the research is the relationship between estrogen and testosterone and the decline of cognition in older age. General findings suggest that estrogen may serve as a protective factor in cognitive decline in elderly women, whereas lack of testosterone in men may be linked to a general decline in cognition. In this section we will discuss the implications of hormones on men and women's cognitive functioning throughout the lifespan.

Studies in women have identified a relationship between specific brain regions and estrogen. More specifically, the prefrontal cortex and the hippocampus have been identified as areas that improve in function due to increased estrogen (Hara, Waters, McEwen & Morrison, 2015). The hippocampus, the brain region responsible for memory and learning, appears to be affected by stress differently in men and women. Researchers found that women have a heightened sensitivity to stress within the hippocampus region. For example, ten days of a significant stressor in men causes the opioid system within the hippocampus to "shut down," whereas in women, the system is "primed." This priming encourages excitement and learning when the individual is exposed to activation of the opioid system again (Marrocco & McEwen, 2016). As you will see in Module 10, this may have implication on the development of psychological symptoms post stressful situations (i.e. depression, anxiety, PTSD) as women's systems may have learned to fear a specific situation due to the "primed" system.

Endocrine changes appear to be largely responsible for age-related cognitive decline in both men and women (Henderson, 2008). In women, the most significant change in hormones occurs during menopause. While menopause can occur naturally, it can also be medically induced via the removal of the ovaries and uterus due to a variety of reasons (i.e. cancer, pregnancy complications,

etc.). Research examining cognitive effects in women experiencing either natural or medically induced menopause indicates that regardless of the menopause method, women are at an increased risk for cognitive decline once menopause is "complete." Interestingly, cognitive decline in women who undergo menopause due to medical necessity respond to estrogen replacement, whereas those who undergo menopause naturally do not respond as favorably to estrogen support (Phillips & Sherwin, 1992). It should be noted that although cognitive declines due to reduced estrogen are observed, they are often mild and are generally observed as deficits in concentration and processing speed (Kok et al., 2006).

When examining the relationship between men and cognitive decline, testosterone has been identified as a variable that may significantly impact performance on a variety of cognitive tasks. For example, men with low levels of testosterone have been shown to perform lower on cognitive tasks such as memory (Barrett-Connor et al., 1999), executive functioning (Muller et al., 2005), and attention (Cappa et al., 1998). The effects of testosterone on these cognitive tasks appear to have a greater effect when assessed in elderly men; results on the effects of testosterone and cognition does not appear to impact young men (Yaffe et al., 2002; Barret-Connor et al., 1999).

Similar to that in women, researchers have also examined outcomes in performance with supplementation of testosterone in older men experiencing low levels of testosterone. Findings indicate that supplementation of testosterone is an effective method to improve working memory and other cognitive function in older men (Janowsky, Chavez, & Orwoll, 2000; Cherrier et al., 2001). It should be noted, however, that despite the support for increased testosterone and cognitive function, researchers are still unsure of how *much* testosterone is needed for "optimal" cognitive performance (Barrett-Connor et al., 1999).

8.4. The Brain

Section Learning Objectives

- To identify gender differences in the lateralization of the brain
- To identify gender differences in cortical thickness of the brain
- To identify gender differences in myelination of the brain

Another attempt to explain sex differences is through the anatomy of the brain. **Sexual dimorphism,** or the "condition where two sexes of the same species exhibit different characteristics beyond the differences in their sexual organs" (https://en.Wikipedia.org/wiki/Sexual_dimorphism(opens in new window)), has long suggested that differences in brain anatomy, size, and volume among genders are responsible for the differences in behavior. The purpose of this section is to explore these brain differences and determine how they may impact men and women's behavior.

8.4.1 Lateralization

The brain is divided into two hemispheres and connected via the corpus collosum. The right hemisphere is thought to be dominant in spatial abilities whereas the left hemisphere is dominant in verbal tasks. While early researchers proposed that women were more right brained and men were more left brain, their theory has been continually refuted over the years with many studies suggesting that both genders utilize both brain hemispheres equally (Bishop & Wahlsten, 1997).

So, if men and women use both sides of their brain equally, maybe men and women utilize the brain regions differently? More specifically, what if women were more bilateral (utilizing both hemispheres) whereas men were more lateralized, thus using each hemisphere for distinct functions? Again, researchers failed to support these findings consistently. One consistent argument against the bilateral argument is *if* women were more bilateral, one would expect women to have a larger corpus collosum due to the increased communication between the hemispheres. Unfortunately, while some studies have found an increased corpus collosum size in women, others have found no significant difference between genders (Steinmetz et al., 1995).

Given these findings, are there any differences between genders regarding lateralization of brain? Despite the lack of evidence for sex differences in lateralization, there is some support for lateralization of spatial skills. Findings indicate that men would use their right hemisphere whereas women were more bilateral (Vogel, Bowers, & Vogel, 2003). Thus, many researchers fail to find a difference in hemisphere use between the genders, however, of those that do, they are consistent in that men appear to utilize their right hemisphere, whereas women are more bilateral.

8.4.2 Cortical Thickness

Cortical thickness, or the tissue volume and tissue composition of the cerebrum, has long been explored as a possible explanation for behavioral differences in men and women. Magnetic Resource Image (MRI) studies have shown that gray matter, white matter, and brain size are smaller in women than men, even after controlling for body size. When both gray and white matter normalize, adult men have a greater proportion of white matter, whereas women demonstrate a greater proportion of gray matter (Allen et al., 2003; Gur et al., 1999). Women also demonstrate significantly greater global and regional cortical thickness, while no significant thickening is observed in men. This significant cortical thickening in women is localized in anatomical regions consistent with studies that support sexual dimorphism (Kiho et al., 2006).

During childhood and adolescence, white matter volume increases faster in boys than in girls. When examining specific brain regions, greater diffusivity was found in the corticospinal tract and the frontal white matter in the right hemisphere for boys, whereas greater diffusivity was found in the occipital-parietal regions and the most superior aspect of the corticospinal tracts in the right hemisphere in girls (Rabinowicz, Dean, Petetot, & de Courten-Myers, 1999). Coincidently, girls show a greater organization in the right hemisphere compared to the left hemisphere for boys. These differences in brain matter and diffusivity may indicate differing developmental trajectories for both boys and girls, as well as possibly explain gender-specific abilities and/or behavioral differences between sexes.

8.4.3 Myelination

Myelination, or the development of an insulating myelin sheath around nerves so they can transmit information more quickly, develops earlier in boys than girls. More specifically, by the age of two, myelination of long fiber tracks in the brain is more developed in males than females, thus allowing information to transmit faster in males.

One particular study examined brain density changes in girls and boys through childhood and adolescents. The findings from the study indicated that boys showed significantly greater loss of grey matter volume and an increase in both white matter and corpus collosum area compared with girls over a similar age range. Girls did show significant developmental changes with age, but at a slower rate than boys (DeBellis et al., 2001). The researchers argue that grey matter decreases are likely to reflect dendritic pruning which typically occurs during puberty. Dendritic pruning essentially eliminates extra neurons and synaptic connections to increase the efficiency of neuronal transmissions. It is suspected that the white matter density increase is related to increased myelination and/or axonal size, which also helps improve the efficiency of neuronal transmission.

Another aspect of myelination that appears to be different in men and women is related to Multiple Sclerosis (MS). MS is a chronic inflammatory disease of the central nervous system that causes inflammation, demyelination and axonal damage, leading to a wide range of neurological symptoms. It is found to be more prevalent in women. In fact, women are two to three times more likely to be diagnosed with MS than men. While the ultimate cause of MS is damage to the myelin, nerve fibers, and neurons in the brain and spinal cord, the onset of this degeneration is unknown. There is suspect that it is a combination of both genetic and environmental factors, however, further research is needed on this disease (National Multiple Sclerosis Society, 2019).

Regardless of these anatomical differences between males and females, it is important to note that difference in brain structure does not translate into a sex difference in brain function (DeVries & Sodersten, 2009). In fact, researchers observe activation of different brain areas in men and women when they are performing the same task. Therefore, differential activation does not always translate to differential performance. Further support for this finding comes from studies that observe men and women utilizing different strategies to complete the same task. Due to differences in strategies, it is not surprising that different brain regions are activated in men and women on the same task. Finally, it is important to remember that the brain is not constant and that behavior also has an impact on brain activation.

Module Recap

Module 8 explored the biological differences between males and females. We are all comprised of billions of cells that contain DNA, genes, and chromosomes. While most of our genetic make-up is the same, there are some small differences that lead to significant physical differences. We learned that occasionally, cell division can go array and chromosomal abnormalities can occur. We briefly discussed some of the most common sex and non-sex linked chromosomal abnormalities.

We discussed the importance of the endocrine system and how the HPA axis responds to stressful situations. We identified different anatomy that is involved in regulating hormones- both for sexual reproduction and basic bodily function (homeostasis).

Hormones can have significant implications on behavior and we discussed the literature on the relationship between sex hormones and men and women's behaviors and cognition. Finally, we discussed differences in brain structure and function in men and women. Although sex differences in brain anatomy and function are not clear, there are some implications for differences in male and female brains that may account for behavior differences between genders.

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4: APPLYING A HEALTH LENS (PHYSICAL AND MENTAL)

4.1: Module 9 – Gender Through a Health Psychology Lens
4.2: Module 10 – Gender Through a Clinical Psychology Lens

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4.1: Module 9 – Gender Through a Health Psychology Lens

Module 9: Gender Through a Health Psychology Lens

Module Overview

Unequivocally, women are sicker than men. They report more pain, more mental health problems- including a higher diagnosis rate of most psychological disorders (See Module 10), and report more physical symptoms. Despite this increase in overall illness, women live longer than men! In fact, men are more likely than women to die in 9 or the 10 leading causes of death!

The purpose of this module is to explore the gender differences in mortality and morbidity rates, as well as general statistics regarding men and women's health. We will also explore the differences between men and women's health behaviors, including negative health behaviors that may impact their own mortality and morbidity. Finally, we will briefly discuss environmental factors that may impact an individual's perceived and actual physical well-being.

Module Outline

- 9.1. Mortality
- 9.2. Morbidity
- 9.3. Health Behaviors
- 9.4. Environmental Factors and Physical Health

Module Learning Outcomes

- To understand the difference between mortality and morbidity with respect to gender
- To identify the leading causes of mortality in the United States
- To identify and explain the morbidity factors that contribute to mortality
- To identify the gender differences among these morbidity factors
- To identify the implications of positive and negative health behaviors on morbidity
- To identify the impact of environmental factors such as marriage, parenting, and bereavement on one's overall well-being

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9.1. Mortality

Section Learning Objectives

- To increase knowledge about factors that contribute to men and women's life expectancy
- To identify leading causes of death in men and women
- To increase knowledge on crime statistics specific to men and women

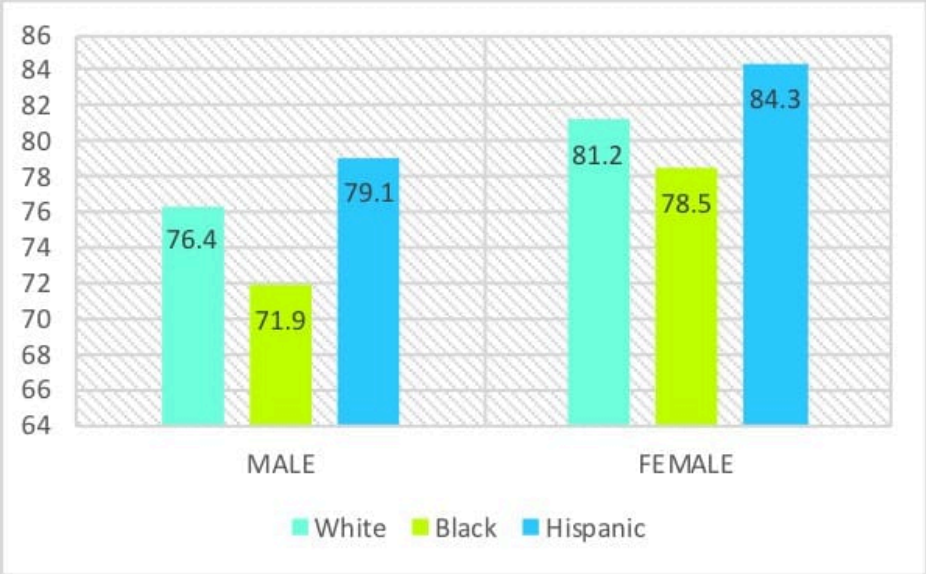
9.1.1. Life Span/Expectancy

Men die younger than women across all ethnicities within the United States. Although boys are born at a slightly higher rate than girls, more boys die than girls at every age group. After birth, males have higher death rates than females. In fact, infant girls in the NICU outperform boys with decreased time spent in the NICU. The higher death rate in males continues throughout every age group of the lifespan. Because of these differences in birth and death rates, there are more boys than girls until age 18, where girls outnumber boys.

According to the 2017 CDC statistics, the life expectancy at birth was 78.6 years for the total US population. Since we know men do not live as long as women, and that there are differing mortality rates across ethnic groups, it's important to identify the life expectancy of each gender with respect to ethnicity. The life expectancy at birth for White men was 76.4, and 81.2 for White women. Life expectancy for Black women was less than White women at 78.5, and Black men were significantly lower

than White men at 71.9. Hispanic men and women had the highest life expectancy across both genders with Hispanic women living on average to age 84.3 and Hispanic men 79.1 (Arias & Xu, 2019). On average, women outlive men across ethnicities by approximately 5 years!

Figure 9.1. Life Expectancy by Gender and Ethnicity



There hasn't always been a significant difference in life expectancy between men and women. When looking back to the 20th century, the life expectancy for White men in 1900 was age 47 and age 49 for women. Over the years, thanks to improved technology and advancement in medicine, as well as improved nutrition and elderly care, these rates steadily rose. The sex difference in mortality reached its largest difference in 1979 when women outlived men by nearly 7.8 years. This increased sex difference is largely related to a reduction in women's mortality during childbirth and the increase in men's mortality from heart disease and lung cancer (Minino et al., 2002).

The gap continues to vary between genders, with the smallest gap in recent years occurring in 2010. This narrowing is most likely related to the proportionate decrease in heart disease and cancer mortality among men than women, in addition to the increased incidence of lung cancer among women (Rieker & Bird, 2005). Although we will discuss in more detail later in this chapter, between 1979 and 1986, the incidence of lung cancer in men was 7%, however, in women it rose to 44% (Rodin & Ickovics, 1990)! These incidence rates are likely attributed to increased smoking in women, along with an increase of men quitting smoking (Waldron, 1995).

It should be noted that there are sex differences in life expectancy in other countries across the world that are likely dependent on the development of their country. Resources such as access to medical care, clean drinking water, and availability of food have all been linked to the life expectancy across nations. As observed in Table 9.1, the life expectancy varies significantly among 1st, 2nd, and 3rd world countries. Less developed countries have higher rates of infant mortality, pregnancy-related deaths, as well as poverty-related deaths thus contributing to the mortality rate (Murphy, 2003). Despite the lower life expectancies, the trend that women outlive men continues across throughout the world, regardless of the resources.

Table 9.1 Life Expectancy Among Countries by Gender

Table 9.1 Life Expectancy Among Countries by Gender

	Total	Male	Female
1st World			
Hong Kong	84.3	81.3	87.2
Macau	84.1	81.2	87.1
Japan	84.1	80.8	87.3

	Total	Male	Female
Switzerland	83.7	81.7	85.5
Spain	83.5	80.7	86.1
2nd World			
Germany	81.4	79.2	83.7
Slovenia	81.3	78.6	84.1
Czech Republic	79.1	76.2	81.9
Albania	78.7	76.7	80.8
Croatia	78.1	74.9	81.2
3rd World			
Bangladesh	73.2	71.6	75
Cambodia	69.8	67.5	71.8
Senegal	67.9	65.8	69.8
Rwanda	67.8	65.7	69.9
Laos	67.5	65.8	69.1

* 2019 World Population Review: http://worldpopulationreview.com/countries/life-expectancy/(opens in new window)

9.1.2. Causes of Death

The leading causes of death among men and women have changed over the last century due in large part to improvement in technology and advancement in medicine and medical care. In the 1900's, the top three causes of death in the United States were pneumonia/influenza, tuberculosis, and diarrhea/enteritis (CDC, 2019), all of which are largely preventable today. Improvements in public health, sanitation, and medical treatments have led to dramatic declines in deaths from infectious diseases during the 20th century.

As you can see in Table 9.2, Heart Disease and Cancer have claimed the first and second leading causes of death in America, a rank they have held for over the last decade. In fact, together these two categories are responsible for 46% of deaths in the United States.

Table 9.2 Top 10 Leading Causes of Death in US

Table 9.2 Top 10 Leading Causes of Death in US

Disease	Number of Deaths
Heart Disease	647,457
Cancer	599,108
Accidents	169,936
Chronic Lower Respiratory Disease	160,201
Stroke	146,383
Alzheimer's Disease	121,404
Diabetes	83,564
Influenza and Pneumonia	55,672

Disease	Number of Deaths
Nephritis/Nephrotic syndrome/Nephrosis	50,633
Intentional Self-Harm	47,173

* CDC Leading Cause of Death 2017 https://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm(opens in new window)

The etiology of these diseases are significantly more complicated than the etiology of infectious diseases that once held the top mortality spot. Environmental and behavioral factors, along with negative health habits such as smoking, poor diet, and alcohol consumption all contribute to the increased mortality rates across these disorders. Details of these behavioral factors will be discussed in more detail later in this module (Section 9.3).

As you will see, the death rate among all of these disorders is higher in males than females, with the only exception being Alzheimer's disease, where women have a higher death rate than males. Similar to gender, leading causes of death are also influenced by ethnicity and age. Accidents, suicide, and homicide account for majority of the sex differences in mortality among younger individuals while, heart disease and cancer account for majority of the sex difference in mortality among older individuals. In fact, the leading cause of death for Hispanic men and women, White men and women, and Black women age 15-24 is accidents. The leading cause of death for Black men age 15-24 is homicide. Interestingly, although HIV is not in the top 10 causes of overall mortality, it is among the top 5 leading causes of death for Black men and women between ages 25-44 and Hispanic women between ages 35-44 (CDC, 2019).

9.1.3. Crime Statistics

According to the United Nations Office on Drugs and Crime, men are more likely than women to commit violent crimes. Men are also more likely to be the victims of violent crimes with the exception of rape. Therefore, men are more likely to not only commit, but also be victims of assault, robbery, and homicide. In fact, 96% of homicide perpetrators and 79% of victims of homicide are men. Majority of male homicides are drug-related (90.5%) and gang-related (94.6%), whereas female homicides are accounted for more domestic homicides (63.7%) and sex-related homicides (81.7%; Homicide Trends in the United States). Women who are victims of homicide are ten times as likely to be killed by a male than female. In fact, the female perpetrator/female victim situation is extremely rare.

In watching the nightly news, one may think that most homicides within the US are at random when in fact, national surveys estimate that only 12% of victims were murdered by strangers, and 44% of victims of violent crimes actually knew their perpetrator (US Department of Justice Federal Bureau of Investigation, 2009). The perpetrator/victim relationship differs for men and women; women are more likely to be killed by someone they know.

9.2. Morbidity

Section Learning Objectives

- To understand factors that contribute to increase use of preventative care
- To understand gender specific factors that contribute to the development of cardiovascular disease
- To understand gender specific factors that contribute to an increased risk of various cancers

We have already talked a bit about how men are more likely to *die* than women, but what about gender differences in diagnosis of illnesses? Surprisingly, women are actually more likely to be diagnosed with an illness than men. There are many factors that contribute to this discrepancy, including preventative care and negative health behaviors (which we will discuss later). Additionally, because women do live longer than men, there is more time/opportunity for women to be diagnosed with an illness, particularly in their elderly age. Therefore, purpose of this section is to discuss the difference in morbidity rates and gender discrepancies among cardiovascular disease and cancer, seeing as these two disorders alone account for over half of all deaths in the United States.

9.2.1. Preventative Care

Before we discuss gender differences in diagnosis and death rates with regards to cardiovascular disease and cancer, it is

important to discuss one factor that greatly contributes to not only diagnosis, but also prognosis: preventative care. In looking back at my grandparents, parents, and then even within my household, it is not surprising that women are more likely than men to seek out preventative care. From an early age, women are more conscious of health-related behaviors such as healthy eating habits and reduced sugar intake. Furthermore, women are more likely than men to engage in monthly self-exams and attend annual physicals (Courtenay et al., 2002). Women are also observed adhering to a prescribed medical regimen more closely than men and are more likely to follow-up with a physician's instructions.

One factor that may contribute to the increase preventative care behaviors in women is reproductive issues. Women are encouraged to have yearly "well-women" visits that may include pap smears, breast exams/mammograms, and birth control evaluation. Additionally, women also have more medical appointments during and immediately following pregnancy, as well as older adults during menopause. Because men do not require similar medical care throughout their life, they may not have as well of an established resource as women.

What are the benefits of this established care? Well, if women are seen yearly for well check appointments, more serious medical conditions may be identified earlier than their male counterparts. Early diagnosis generally has a better prognosis. This may also explain why women tend to have a higher diagnosis rate of health disorders, yet a lower rate of mortality.



9.2.2. Cardiovascular Disease

Cardiovascular disease refers to any medical condition that is related to heart and blood vessel disease. Most of these diseases are related to **atherosclerosis,** or the build-up of plaque in the walls of the arteries. Overtime, this build-up can narrow or even completely block the blood flow through the arteries, thus causing heart attacks or strokes.

A heart attack occurs when the blood flow to a part of the heart is blocked by a clot, causing reduced blood flow and death to that artery. While most people survive their first heart attack, medications and lifestyle changes are important to ensure a long, healthy life (American Heart Association, 2019).

An **ischemic stroke**, which is the most common type of stroke, occurs when a blood vessel that feeds the brain is blocked. Due to the blockage, some brain cells will begin to die, thus causing loss of functions controlled by that part of the brain. A **hemorrhagic stroke**, which is when the blood vessel within the brain bursts, often occurs by uncontrolled **hypertension** (i.e. high blood pressure). One can also experience a TIA or **transient ischemic stroke** which is caused by a temporary clot (American Heart Association, 2019); the effects of a TIA stroke are often minimal compared to a hemorrhagic or ischemic stroke.

The effects of a stroke depend on a variety of details, the main being the location in the brain that the vessel is blocked or bursts. For example, if the stroke occurs in the left-brain hemisphere, it could cause right side paralysis, speech/language problems, slow physical movement, and/or memory loss. A right-side stroke could result in left side paralysis, vision problems, fast behavioral movements, and/or memory loss. A stroke can also occur in various other brain regions and can be of various size. Both the location and size of the blood clot will impact the severity of the effects (American Stroke Association).

Congestive heart failure, another condition under the umbrella term of cardiovascular disease, occurs when the heart is not pumping blood as effectively as it should within one's body. The implications of congestive heart failure are vast as the individual is not able to receive adequate supply of blood and oxygen throughout their body. Prior to developing congestive heart failure, one will likely experience abnormal heart rhythms, or **arrhythmia**. Arrhythmia's can be categorized as a heart rate that is too slow (i.e. less than 60 beats per minute; **bradycardia**) or a heart rate that is too fast (i.e. more than 100 beats per minute; **tachycardia**; American Heart Association, 2019). Again, the effects of congestive heart failure can range from difficulty breathing after increased activity to death.

9.2.2.1. Prevalence rates. According to the American Heart Association, 121.5 million American adults have some form of cardiovascular disease. It is the leading cause of death of men of most racial and ethnic groups in the United States. In fact, the only ethnic group that it is not the leading cause of death in is Asian American/Pacific Islander men for which it is second to cancer. In women, cardiovascular disease is the leading cause of death for African American and White women; American Indian and Alaska natives have similar rates of cardiovascular disease and cancer; and Hispanic and Asian American/Pacific Islander women it is second to cancer.

Among cardiovascular disease in the United States, coronary heart disease was the leading cause of death (42.3%), followed by stroke (16.9%), high blood pressure (9.8%), heart failure (9.3%), diseases of the arteries (3.0%), and other cardiovascular diseases (17.7%; CDC, 2019). There are significant differences among gender and ethnicities of rates of coronary heart disease within the United States. More specifically, 7.7% of White men, 7.1% of Black men, and 5.9% of Hispanic men have coronary heart disease. Women follow a similar trend with 6.1% of White women, 6.5% of Black women, 6% of Hispanic women, and 3.2% of Asian women are diagnosed with coronary heart disease (CDC, 2019).

There is an observed difference in incidence rates of strokes between men and women. More specifically, men have a higher incidence of stroke until advanced age, with a higher incidence of stroke in women after age 85 (Rosamond et al., 2007). Despite the lower incidence rate in women until older age, more women than men die from stroke. Women also appear to have poorer functional outcome after strokes than men. One study found only 22.7% of women were fully recovered 6-months after an ischemic stroke compared to 26.7% of men. Women were also less likely to be discharged home after a stroke admission (40.9 vs 50.6%; Holroyd-Leduc, Kapral, Austin, & Tu, 2000). Researchers do caution that these studies did not account for age, and therefore, the poorer functional outcome may be related to age as women tend to have strokes older than men.

Similar to strokes, there is also an observed difference in age of first heart attack between men and women. More specifically, men tend to have heart attacks at younger ages than women with the average age at the first heart attack for men being 65.6 years and 72.0 years for females (Harvard Heart Letter, 2016). While this gender discrepancy is likely due to women living longer than men, thus having more heart attacks later in life, some also attribute the difference to the different heart attack symptoms between men and women. While both men and women primarily report chest pain as the primary discomfort prior to a heart attack, research indicates women are also more likely to identify symptoms such as nausea, dizziness, shortness of breath and fatigue more than chest pain. Because of these atypical symptoms, women may not seek medical care as immediately as men who are experiencing chest pain (Heart Attack Symptoms: Women vs. Men, 2019)

Women have a worse prognosis from heart disease compared to men (Berger et al., 2009). One explanation is that women are older when heart disease is diagnosed, as well as treated less aggressively than men. Most clinical trials that made important contributions to the advancement of care for heart disease have failed to include women in their research. The Multiple Risk Factor Intervention Trial Research Group (1983), one of the fundamental research studies on cardiovascular disease, included zero women in their 12,866 sample size. Because this study was critical in establishing diagnostic tests and treatment for cardiovascular disease, many argue that women are at a disadvantage in assessment and treatment as their physiology and symptom presentation was not included in the development of these tools.



9.2.3. Cancer

Cancer is a group of diseases that involves the growth of abnormal cells. There are more than 100 types of cancer that effect many different parts of the body. Although discussing every type of cancer is well beyond the scope of this course, it is important to identify the prevalence rates and death rates of the leading cancers specific to males and females.

According to the American Cancer Society's statistics, the top 5 estimated new cases of cancer among all individuals in the US in 2019 include Breast (271,270), Lung and bronchus (228,150), Prostate (174,650), Colorectum (145,600), and Melanoma of the skin (96,480). Interestingly, the top 5 cancer deaths in 2019 were as followed: Lung and bronchus (142,670), Colorectum (51,020), Pancreas (45,750), Breast (42,260), and Liver (31,780). Despite the alarmingly high rate of breast cancer diagnoses, treatment and prognosis is generally good, thus the low percentage of death rates compared to incidence rates each year.

When examining gender differences, breast cancer is expected to account for 30% of female cancers and 14% of female deaths. While non-Hispanic White women are more likely to be diagnosed with breast cancer than African-Americans, African-American women are more likely to die from breast cancer. Second to breast cancer is lung cancer, which is expected to account for 12% of female cancer cases and 25% of female cancer deaths. Finally, colon and rectal cancer accounts for 8% of all cancer cases and 8% of female cancer deaths (Hook, 2017).

In men, lung cancer is the leading cause of cancer related deaths, causing more deaths than the next three leading causes (prostate, colorectal, and pancreatic cancer) combined. While prostate cancer is the number one diagnosed cancer in men, it is the second leading cause of cancer deaths in men. In fact, the 5-year survival rate for prostate cancer is 99%. Finally, colon and rectal cancer is both the third most frequently diagnosed and third cancer causing death in men.

9.2.3.1. Risk factors. Given the large number of cancer diagnoses and deaths every year, it is important that individuals identify risk factors in efforts to reduce the likelihood of developing cancer throughout their lifespan. Many of the behaviors we are about to discuss in section 9.3 are risk factors for many types of cancers. For example, active and passive tobacco use is the main risk factor for lung cancer, the number one cause of cancer mortality in the US. Additional environmental exposures such as arsenic, and radon, as well as outdoor air pollution, are also implicated in the rise of lung cancer diagnoses. Other factors such as poor dietary intake have also been linked to an elevated risk of lung cancer development.

Colon and rectal cancer is largely related to a family history of colon related illnesses such as colon polyps, inflammatory bowel disease, and colorectal cancer itself. Additionally, negative behaviors such as smoking, increased alcohol consumption, obesity, and eating large amounts of red and processed meats also places an individual at risk for developing colon cancer.

Finally, reproductive cancers- cancers of the reproductive systems such as breast cancer and prostate cancer- have a strong genetic component. For example, the BRCA1 and BRCA2 genes are found in some variations of breast cancer. In fact, women with these genetic mutations are also at greater risk for other reproductive cancers such as ovarian cancer. Some studies have also linked the BRCA mutations to prostate cancer in men, however, additional research is needed to fully understand this relationship.

Additional risk factors for both breast and prostate cancer include being over the age of 50, increased alcohol consumption, and smoking (American Cancer Society, 2019).

9.3. Health Behaviors

Section Learning Objectives

- To understand how exercise may have a positive effect on an individual's health
- To understand how obesity negatively impacts one's overall health and contributes to an increased morbidity rate
- To understand how alcohol negatively impacts one's overall health and contributes to an increased morbidity rate
- To understand how tobacco negatively impacts one's overall health and contributes to an increased morbidity rate
- To understand how drugs negatively impacts one's overall health and contributes to an increased morbidity rate

We just discussed a few of the most common types of illnesses diagnosed in the United States in both men and women. While we do not know exactly why some people develop some disorders and others do not, we do know there are some factors that have a positive impact (i.e. reducing the likelihood of developing a disorder) and others that have a negative impact (i.e. increase the likelihood of developing a disorder) on one's overall health. Therefore, the focus of this section is to identify these factors that contribute to an increased morbidity rate. Additionally, we will discuss the gender discrepancies observed among these contributing factors



9.3.1. Exercise

Our first factor, exercise, is a positive health behavior that has shown to reduce the rates of mortality and morbidity. More specifically, increased activity level is associated with reduced heart disease, hypertension, colon cancer, Type 2 diabetes, osteoporosis, and depression. Conversely, reduced physical activity is associated with obesity and subsequent health complications (See section 9.3.2).

According to the Physical Activity Guidelines for Americans, the recommended guidelines for physical activity include 30-minutes, five days a week of moderate-intensity exercise such as walking, bicycling, gardening, or any other activities that produce a small increase in breathing or heart rate. It is estimated that 21.9% of adults met this criteria last year with 26.9% of adults not engaging in physical activity at all. This statistic varies significantly between ethnic groups. More specifically, 25% of non-Hispanic White adults, 20.8% of Non-Hispanic Black adults, 16.6% Hispanic adults, and 17% Asian adults reported meeting the Physical Activity Guidelines for Americans within the last year (Center for Disease Control, 2019).

As we will discuss in the next section, childhood obesity has been on the rise, which has been attributed to a decrease in childhood physical activity and an increase in sedentary activities such as television watching and computer game playing. In

a study by the CDC (2010a) an estimated 46% of high school boys and 28% of high school girls said they had been physically active for five of the past seven days. The rates of girls who reported not engaging in any physical activity over the past seven days was higher (30%) than boys (17%) suggesting the gender gap in exercise begins from an early age.

The gender gap in physical activity has long been attributed to gender specific behaviors. More specifically, boys are more likely to participate in sports, whereas girls are more likely to be involved in individual, noncompetitive sports such as dance. In fact, only 25% of girls participate in sports compared to 43% of boys. Despite these statistics, girls' involvement in sports throughout the lifespan have been increasing over the past decade (CDC, 2010a).

9.3.1.1. Effects of exercise. Several longitudinal studies have examined the relationship between physical activity and disease incidence. Findings suggest strong evidence for a relationship between amounts of moderate-to-vigorous physical activity and cardiovascular disease mortality. The risk of a cardiovascular event decreased with increased exposure of physical activity up to at least three to five times per week. When exploring the studies further, Sattelmair and colleagues (2011) reported a 14% reduction in developing coronary heart disease for those reporting moderate activity level compared to those with no leisure-time physical activity. Additionally, rates of ischemic and hemorrhagic stroke, as well as coronary heart disease were significantly reduced for individuals participating in moderate physical activity level (Kyu et al., 2016). Interestingly enough, none of these studies reported a sex difference in findings suggesting that both men and women benefit equally from an increase in physical activity level.

Researchers have also explored the relationship between physical activity level and incidence of cancer. As one can imagine, it's difficult to determine a relationship between physical activity and cancer in the general sense, however, strong relationships were found for specific cancers. More specifically, greater amounts of physical activity were associated with a reduced risk of developing bladder (Keimling, Behrens, Schmid, Jochem & Leitzmann, 2014), colon, gastric (Liu et al., 2016), pancreatic (Farris et al., 2015) and lung cancer (Moore et al., 2016). While most had similar effects between men and women, physical activity level appeared to have a stronger protective factor for women and lung cancer incidence rates.

The relationship between increased physical activity level and reduced incidence of breast cancer was also found, however, there appears to be a few factors impacting this relationship. More specifically, menopausal status appears to moderate the relationship between physical activity level and menopause status suggesting that physical activity has a smaller effect on postmenopausal women's likelihood of developing breast cancer. This finding is not surprising given that postmenopausal women are already at an increased risk to develop breast cancer in general. Additionally, histology of breast cancer is another factor that impacts the relationship between physical activity and breast cancer incidence rate. Breast cancers that have a strong genetic histology are less likely to be impacted by physical activity level (Wu et al., 2013).

It is obvious from these studies that any amount of physical activity has greater benefit than no physical activity at all, although an increase in moderate-to-vigorous physical activity does appear to increase health benefits, particularly related to cardiovascular disease. It is important to note that physical activity also has an inverse relationship with mental health disorders as an increase in physical activity level is associated with a decrease in mood and anxiety disorders.

9.3.2. Obesity

While exercise is shown to improve cardiovascular function and overall physical health, obesity, or being excessively overweight, can have negative health implications. More specifically, obesity is a significant risk factor for mortality among a host of medical issues such as heart disease, type 2 diabetes, hypertension, high cholesterol, and some cancers. Before we discuss the health implications of obesity, it is important that we identity how an individual is categorized as obese.

The most common way to identify if an individual is obese is through the **body mass index** (BMI). The formula for BMI is one's weight in kilograms divided by height in meters squared. For non-metric users, it can also be calculated by pounds divided by inches squared and then multiplied by 703. This number can then be compared to the National Institute of Health's standards (see table 9.3). There are some arguments against the use of the BMI to determine obesity as it does not account for difference in muscle and fat density; however, it continues to remain the most common standard for assessing obesity in the US.

Table 9.3 NIH BMI Categories

Table 9.3 NIH BMI Categories	
Underweight	< 18.5
Normal	18.5-24.9
Overweight	25-29.9

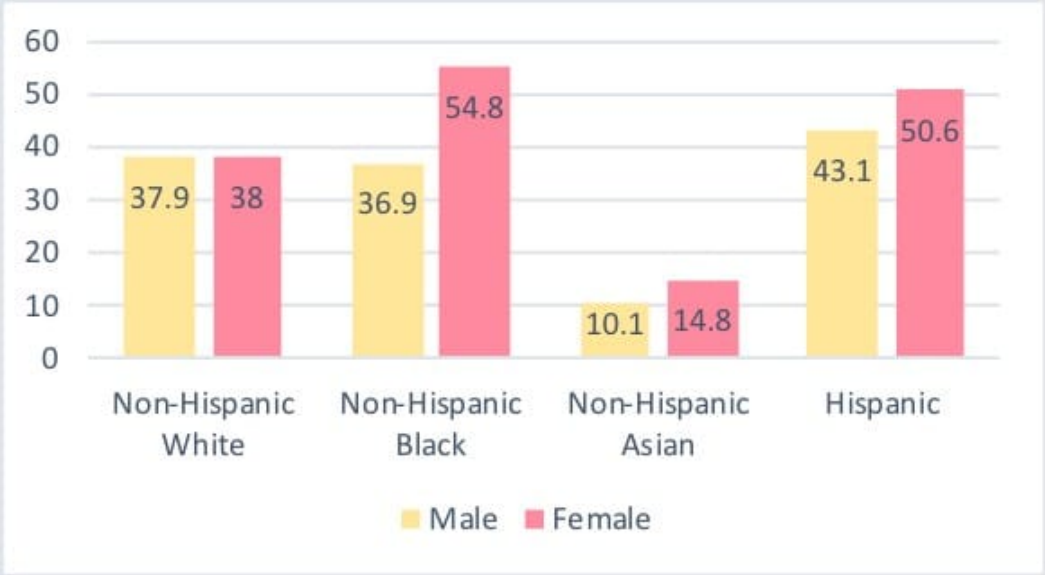
Table 9.3 NIH BMI Categories	
Obese	>30

It is also important to note that obesity often looks different in men and women. **Android obesity**, more commonly known as the "apple" shape, is more commonly seen in men. These individuals tend to carry a lot of their weight in their abdomen. According to the android obesity measure, men with a waist to hip ratio greater than one and women with a waist to hip ratio greater than 0.8 are at significant risk for obesity related health problems. On the contrary, **gynoid obesity**, which is more commonly seen in women, is more commonly described as "pear" shape. These individuals tend to have more weight in their hip region, thus the description of a pear. Individuals with a physical shape consistent with android obesity are at greater health risks than those with gynoid obesity. This is true for both men and women, however, research indicates that obesity has a stronger relationship to mortality in men when individuals are under age 45, and a stronger relationship to mortality in women when individuals are over the age of 45 (Lean, 2000).

9.3.2.1. Prevalence rates. According to the CDC, the prevalence of obesity among US adults was 39.8%; however, the percentage of obese adults aged 40-59 (42.8%) was higher than among adults aged 20-39 (35.7%). While men are more likely to be overweight than women, women are more likely to be obese. This was also observed in the CDC statistics among individuals in the 40-59 age group (40.8% men; 44.7% women) and the 20-39 age group (34.8% men; 36.5% women). Overweight and obese men are less likely than women to perceive their weight to be a problem (Gregory et al., 2008).

There also appears to be a significant difference in obesity rates among different ethnic groups. Non-Hispanic Asian adults had the lowest (12.7%) rate of obesity compared to all other ethnic groups. Hispanic (47%) and non-Hispanic black (46.8%) adults had the higher prevalence rates of obesity than non-Hispanic white adults (37.9%). The gender difference among ethnicities reflects that of the general public with women having a higher rate of obesity than men (see Figure 9.2 below). Views of obesity differ across gender and races which may explain some of the difference in obesity among ethnic groups and gender. White women report more body dissatisfaction than Black and Hispanic women (Grabe & Hyde, 2006); however, women of all ethnicities report wishing they were thinner but the desire occurs at a lower BMI for White girls than Black and Hispanic girls (Fitzgibbon, Blackman & Avellone, 2000).

Figure 9.2 Obesity Rates among Gender and Ethnicity



Childhood obesity has also risen over the last few decades. The prevalence rates of obesity among US youth was 18.5% (CDC). The obesity rates were highest among adolescents (20.6%), followed by school-age children (18.5%) and preschool-age children (13.9%). Unlike the gender discrepancy in adulthood, childhood obesity does not differ significantly between adolescent boys and girls (20.2% and 20.9%, respectively) or school age boys and girls (20.4% and 16.3%, respectively). It should be noted that obesity in children is defined differently than that in adults. More specifically, obesity in children is categorized as a BMI at or above the 95th percentile for one's age and sex.

While it is obvious that obesity rates differ between genders, a discrepancy is also found by income and educational level. More

specifically, obesity rates appear to increase as income level decreases, with individuals earning greater than 350% above the poverty level having significantly lower rates of obesity than those making less than 350% above the poverty level. Similarly, obesity rates also appear to increase as education level decreases; college graduates report significantly lower rates of obesity than individuals with some college and those who were high school graduates or less. Researchers attribute the increase obesity rates in lower SES and uneducated families to poor diets and less exercise. Obesity is not related to SES across all ethnic groups, as obesity is related to higher SES in white men, white women, and black women; lower SES among Black and Hispanic men; and unrelated to SES among Hispanic women (CDC, 2019).

9.3.2.2. Effects of obesity. Individuals who are overweight or obese are at an increased risk for many serious health diseases and health conditions. In general, individuals with obesity have a higher mortality rate than individuals within a normal weight range. This is likely related to the increased risk of cardiovascular disease in overweight individuals. More specifically, individuals who are obese are more likely to have high blood pressure as a result of the increased body fat tissue requiring additional oxygen and nutrients. Similarly, atherosclerosis is present 10 times more often in obese individuals than those of normal weight. Coronary heart disease is also another risk factor due to the increased fatty deposits build up in arteries. The narrowed arteries and reduced blood flow also make obese individuals at greater risk for having a heart attack or stroke (Lean, 2000).

Second to cardiovascular disease is diabetes. Type 2 diabetes is usually diagnosed in adults secondary to obesity; however, with the rise of childhood obesity, physicians are diagnosing Type 2 diabetes more frequently in children. Type 2 diabetes involves resistance to insulin, the hormone that regulates blood sugar. Due to the increased weight, the pancreas makes extra insulin to regulate blood sugar, however, overtime, the pancreas cannot keep up, thus sugar builds up in the blood stream. The effects of uncontrolled Type 2 diabetes can cause significant damage to one's kidneys, eyes, and nerves, thus effecting your entire body. If left uncontrolled for a significant time period, it can lead to death (Centers for Disease Control and Prevention, 2019).

Overweight individuals are also at an increased risk for various types of cancers. More specifically, overweight women are more likely to be diagnosed with breast, colon, gallbladder, and uterine cancer than their normal weight peers. Men are also at an increased risk for colon cancer, as well as prostate cancer (Center for Disease Control and Prevention, 2019).

Finally, psychosocial effects of obesity across the lifespan are often observed, particularly in a culture where physical attractiveness is measured by body size. Overweight individuals are at risk for various mental health disorders such as depression and anxiety. The link between obesity and depression is difficult to define as it could be related to the neuroendocrine changes associated with stress and depression, which may cause metabolic chances that predispose individuals to obesity (Vidya, 2006). Overweight children and adolescents are at an increased risk for bullying at school. Several studies have found that obese adolescents are more isolated and marginalized, and experience more teasing and bullying (Faulkner et al., 2001; Janssen et al., 2004; Strauss & Pollack, 2003).



9.3.3. Alcohol

Alcohol, unlike other substances, can have positive health benefits in moderation. For example, moderate alcohol consumption in

both men and women may reduce the risk of heart disease and stroke. Although there is some support for this risk reduction, it may be offset at higher rates of alcohol use due to increased risk of death from other types of heart disease and cancer (Health Risks and Benefits of Alcohol Consumption, 2000). With that said, alcohol in large quantities is detrimental to one's health as evidenced by nearly 3 million deaths every year related to the harmful use of alcohol.

While the DSM-5 defines Alcohol Use Disorder as recurrent alcohol use that also impacts one's ability to function in daily life, it is important to acknowledge that one does not need to meet diagnostic criteria for Alcohol Use Disorder to develop significant health consequences. With that said, there are "categories" established by researchers to help identify consumption rates of alcohol among individuals. Per the Center for Disease Control, **binge drinking**, which is the most common form of excessive drinking, can be defined as four or more drinks during a single occasion for women, and five or more drinks for men. **Heavy drinking** is defined as consuming 8 or more drinks per week for women and 15 or more drinks per week for men. Finally, **moderate drinking** is defined as up to one drink per day for women and up to two drinks per day for men.

9.3.3.1. Prevalence rates. Men are more likely to engage in binge and heavy drinking than women. An estimate from the CDC suggests that 23% of men binge drink 5 times a month, which is nearly two times more likely that women (12%). A study conducted by Wilsnack and colleagues (2000) found that men were more likely to drink alcohol more frequently, consume higher amounts of alcohol at one time, and had more episodes of heaving drinking. Because of this increase in consumption, men were also more likely to suffer adverse consequences of drinking compared to women. These findings have been replicated in college age students where men also report drinking more alcohol, as well as having more alcohol-related problems than women (Harrell & Karim, 2008); however, when examining alcohol related behaviors in high school students, rates of frequency and consumption are similar among both males and females (Center for Disease Control and Prevention, 2010a).

9.3.3.2. Gender differences. While some attribute the gender difference in alcohol consumption to societal attitudes being more accepting of men to consume larger amounts of alcohol than women, others argue this is not applicable to the current generation due to the smaller discrepancy between genders over the past few years. Despite the narrowing differences, there does appear to be some social expectations on women to not consume large quantities of alcohol as it may interfere with her abilities to care for her family (Nolen-Hoeksema & Hilt, 2006).

Another more supported explanation for the gender difference in both effects and consumption of alcohol is due to differences in physiology. It takes proportionally less alcohol to have the same effect on a woman as a man, even when controlling for body weight. More specifically, if a man and a woman of similar height and weight consumed the same amount of alcohol, the woman would have a higher blood alcohol level. This difference is due in large part to the greater ratio of fat to water in a woman's body; men have greater water available within their body to dilute the alcohol. Additionally, men have more metabolizing enzymes in their stomach, which also helps reduce the amount of alcohol quicker, thus reducing the effects of consumption. Because of these physiological differences, women are more vulnerable to long-term negative health consequences than men (Duke University, 2019).

9.3.3.3. Effects of alcohol. Alcohol consumption in excess (i.e. binge drinking) can have immediate health risks such as increased likelihood of injuries from accidents such as automobiles, falls, drownings, and burns. Additionally, individuals who are severely inebriated are also at risk for violence, particularly sexual assault and intimate partner violence. This also coincides with increased risky sexual behaviors that can result in unintended pregnancy and/or sexually transmitted diseases.

Women who drink excessively while pregnant also have an increased risk in miscarriage and stillbirth. Infants born to mothers who drank excessively during pregnancy are at risk for Fetal Alcohol Spectrum Disorders (FASD). FASD causes a range of problems including abnormal appearance, small head size, poor coordination, low intelligence, behavioral problems, and hearing and/or vision problems.

Excessive alcohol use is also attributed to an increase cancer rate. More specifically, an increased rate of cancer in the mouth, throat, esophagus, liver, and colon are observed. While excessive alcohol consumption alone raises the risk of mouth, throat, and esophageal cancer, drinking and smoking together raises the risk even higher. It is believed that alcohol limits the repair of the cells in these regions, thus allowing chemicals in tobacco to permeate the cell membrane more easily (Health Risks and Benefits of Alcohol Consumption, 2000).

Colon and rectal cancer have also been linked with a higher risk of cancer. Although the relationship between alcohol consumption and colon/rectal cancer is stronger in men, the link for an increased risk is found in both men and women. Finally, breast cancer is also found to have a link to alcohol consumption. Women who have only a few drinks a week appear to have a greater likelihood of developing breast cancer than those who do not drink at all (Health Risks and Benefits of Alcohol Consumption, 2000).

Given that the liver filters the body of harsh chemicals, it is not surprising that individuals who consume large amounts of alcohol also are at risk for liver cancer as well as liver disease. **Cirrhosis**, or scarring of the liver, is a common result of chronic alcoholism. Liver damage from cirrhosis cannot be undone, however, if it is diagnosed early, the initial scaring can be treated thus preventing further damage.

Additional long-term effects include cardiovascular disorders such as high blood pressure, heart disease, and stroke. More specifically, heavy drinking is related to an increased risk of having either a hemorrhagic or ischemic stroke. Like mentioned above, minimal alcohol use may actually reduce the risk of stroke, however, this appears to be more protective for men than women. In fact, the risk of having a stroke increases in women when women drink more than one alcoholic beverage a day (Thun et al., 1997).

Individuals with an alcohol abuse problem are also likely to suffer from a comorbid mental health disorder. In fact, approximately one-third of individuals with an alcohol use disorder also met criteria for at least one anxiety or mood disorder in the past 12 months. According to one study, 17% of individuals with an alcohol abuse diagnosis also met criteria for a mood disorder, 16% met criteria for an anxiety disorder, and 35% met criteria for another substance abuse disorder. More specifically, Major Depressive Disorder, Generalized Anxiety Disorder, and Post-Traumatic Stress Disorder were among the specific disorders with the highest comorbidity rate (Burns, Teesson, Lynskey, 2001).



9.3.4. Tobacco

According to the Centers for Disease Control and Prevention, smoking is the single most preventable cause of death. Tobacco accounts for one in five deaths and 30% of all cancer-related deaths including lung, lip, oral, esophagus, pancreas, and kidney. In addition to cancer, smoking has also been linked to heart disease, particularly in women (Tan, Gast, & van der Schouw, 2010). Fortunately, when individuals quit smoking, their risk of developing heart disease decreases dramatically. In fact, within five years of quitting, heart disease rates are similar to that of a nonsmoker.

9.3.4.1. Prevalence rates. According to the CDC's 2017 survey, 14% of all adults were smokers: 15.8% of men and 12.2% of women. This rate is significantly lower than the 23.2% prevalence rate of cigarette smoking in 2000. Researchers suspect that the prevalence rate of smoking will decline through 2030. The reduction in smoking is attributed to an increase tax on cigarettes as well as the increased health warnings of the effects of smoking.

It is also important to mention children and adolescent smoking behaviors as nearly 90% of smokers begin to smoke during adolescence (Substance Abuse and Mental Health Services Administration, 2010). Recent statistics estimate less than 1% of middle school students and 5.4% of high school students smoke cigarettes. These numbers have declined drastically since they peaked in 1997 with 9% of middle school and 25% of high school students reporting smoking cigarettes. Ethnic discrepancies are also present as white teens are more likely to smoke than their black or Hispanic peers (Kann et al., 2018).

9.3.4.2. Effects of tobacco. It's hard to miss advertisements aimed at identifying the negative health effects of smoking. Most

involve an older individual with a raspy voice talking about how they now require oxygen to complete daily activities; others showcase an individual missing part of their face or neck due to surgery to remove cancerous tumors. Given all of this public information, it should not come as a surprise that smoking has a strong relationship with lung cancer. In fact, smoking causes about 90% of all lung cancer deaths (US Department of Health and Human Services). Men who smoke are 25 times more likely to be diagnosed with lung cancer than their nonsmoking peers; women smokers are 25.7 times more likely to be diagnosed with lung cancer (CDC). While the risk of developing lung cancer decreases once an individual quits, they still have a higher risk of developing lung cancer than nonsmokers.

In addition to an increased likelihood of developing lung cancer, individuals who smoke are at an increased risk for diseases caused by damage to the airways and the alveoli (found in the lungs). Chronic Obstructive Pulmonary Disease (COPD) is an umbrella term used to describe a variety of lung diseases such as emphysema, chronic bronchitis, and refractory asthma. Individuals who smoke are 13 times more likely to die from COPD than nonsmokers (US Department of Health and Human Services). These statistics are even higher for individuals who have a diagnosis of asthma, smoking can trigger attacks or make them more severe.

Individuals who smoke are also at a greater risk for diseases that affect the heart and blood vessels, a relationship that appears to be stronger for women than men (Tan, Gast, & van der Schouw, 2010). Smoking has been linked to strokes and coronary heart disease, even in individuals who smoke irregularly. This increased heart disease is likely due to damages to blood vessels which cause them to thicken and grow narrower. Narrowed blood vessels make the heart beat faster which causes blood pressure to increase. Additionally, the narrowed blood vessel also increases an individual's chance of developing a blood clot or blockage, thus increasing chances of stoke.

9.3.5. Drugs

For the purpose of this text, drug use refers to the use of **illicit drugs** which can be defined as any illegal drugs, including marijuana (according to federal law), as well as the misuse of prescription drugs. In 2013, there was an estimated 24.6 million Americans who reported using an illicit drug within the past year. This number has increased 8.3% since the 2002 data collection, which is likely due to the increase in marijuana use among both men and women across age groups. In fact, the use of all other drugs has stabilized or declined over the past decade (National Institute of Drug Abuse, 2019).

When examining gender differences, men are more likely to have higher rates of illicit drug use or dependence than women, however, women are equally as likely as men to develop a substance use disorder (Anthony, Warner, & Kessler, 1994). Studies also suggest that despite the lower prevalence rate of drug use in women, they may be more susceptible to cravings and relapse, two important factors in the maintenance of addiction (Kennedy, Epstein, Phillips, & Preston, 2013; Kippin et al., 2005; Robbins, Ehrman, Childress, & O'Brien, 1999). These gender differences are likely attributed to different physiological responses to various drugs in men and women.

Given that illicit drug use is more common in men, it should not be surprising that men also report more ER visits or overdose deaths than women. In 2017, there were just over 70,000 drug overdose deaths, with men accounting for 66% of these deaths. Opioids are the main driving force in these overdose deaths (National Institute of Drug Abuse, 2019).

9.3.5.1. Illicit drug gender discrepancies. Marijuana. Marijuana is the most commonly used illicit drug among drug users in the United States. Similar to other drugs that we will discuss, males have a higher rate of marijuana use than females. Researchers argue that this gender difference may be related to differences in physiological response to the drug. More specifically, male users appear to have a greater marijuana-induced high (Haney, 2007), whereas women report impairment in spatial memory (Makela et al., 2006). These findings are also supported in animal studies that show female rats are more sensitive to the rewarding, pain-relieving, and activity altering effects of THC (the main active ingredient of marijuana; Craft, Wakley, Tsutsui & Laggart, 2012; Fattore et al., 2007; Tseng & Craft, 2001).

Stimulants. Stimulants refer to cocaine and methamphetamine. Again, research indicates that women may be more vulnerable to the reinforcing effects of stimulants due to increased estrogen receptors compared to men. Animal studies indicate that females are quicker to start taking cocaine and consume larger quantities of cocaine than males. Despite what appears to be an increased addictive physiology, female cocaine users are less likely than males to display abnormal blood flow in the brain's frontal region (Brecht, O'Brien, von Mayrhauser & Anglin, 2004).

In addition to physiological differences, men and women also report differences behind the reason why they engage in stimulant drug use. For women, stimulant use is generally related to a desire to increase energy and decrease exhaustion in work, home, and family responsibilities. Additionally, stimulant use is also cited as a means to lose weight- something that is reported more often

in women than men (Cretzmeyer et al., 2002). Men report using stimulants more often than women as a means to "experiment," as well as replace another drug that may not be available at a given time.

MDMA. MDMA, or more commonly known drugs such as Ecstasy and Molly, are known to produce stronger hallucinatory effects in women compared to men. Despite these differences, men show higher MDMA-induced blood pressure. Research studies indicate that behavioral reactions during drug withdrawal of MDMA substances such as depression and aggression are similar in both men and women. With that said, there are some physiological differences in response to MDMA substances that increase females' likelihood of death than males. More specifically, MDMA interferes with the body's ability to eliminate water and decrease sodium levels in the blood, thus causing users to consume large amounts of fluid. In some cases, the increased fluid consumption can lead to increased water in between cells which can cause swelling of the brain and eventually death. Females appear to be more susceptible of this increase of fluid between cells as almost all of the reported cases of death from this biological change is in females (Campbell & Rosner, 2008; Moritz, Kalantar-Zadeh & Avus, 2013).

Heroin. Men are more likely than women to not only use heroin, but also consume larger amounts and for longer periods of time than women. Furthermore, men are more likely to use heroin intravenously than women (Powis, Griffiths, Gossop & Strng, 1996). Women who do choose to inject heroin are at a greater risk for overdose death than men. While the exact cause for this is unknown, researchers suggest it may be related to the relationship between intravenous drug use and prescription drugs as women who inject heroin are also more likely to use prescription drugs (Giersing & Bretteville-Jensen, 2014).

Prescription Drugs. Nearly 2.5% of Americans report using prescription drugs non-medically in the last month. These drugs include pain relievers, tranquilizers, stimulants, and sedatives. Prescription drug use is the *only* drug category in which women report higher use than men. Researchers suggest the difference in prescription drug use is due to the lower sensitivity and higher reports of chronic pain in women than men (Gerdle et al., 2008). Studies have also reported that women are more likely to take a prescription opioid without a prescription to cope with pain, even when men and women report similar levels of pain. Furthermore, women are more likely to self-medicate and misuse prescription opioids for other issues such as anxiety (Ailes et al., 2008).

Despite the higher use of prescription drug use in women, men are more likely to die from a fatal opioid overdose. With that said, deaths from prescription opioid overdoses increased more rapidly for women than men, with women between the ages of 45 and 54 more likely to die from a prescription opioid overdose than any other age group (Centers for Disease Control and Prevention, 2019).

9.3.5.2. Health effects related to drug use. Individuals who engage in drug use are at risk for other high-risk behaviors associated with drug use that place them at risk for contracting or transmitting diseases such as human immunodeficiency virus (HIV), acquired immune deficiency syndrome (AIDS), or hepatitis (Drug Facts, 2019). Drug addiction has been strongly linked with HIV/AIDS since the disease was first identified. In fact, it is estimated that one in 10 HIV diagnoses occur among people who inject drugs (Centers for Disease Control and Prevention, 2017a). A recent study from the CDC (2017) reported nearly 20% of HIV cases among men, and 21% of HIV cases among women, were attributed to intravenous drug use (Centers for Disease Control and Prevention, 2017b). This is of particular concern for women as there is a risk of disease transmission to their child during pregnancy and birth, as well as through breastmilk (although this is extremely rare).

Hepatitis, or the inflammation of liver, is caused by a family of viruses: A, B, C, D, and E. Intravenous drug use has a strong link to Hepatitis B and Hepatitis C. Without treatment, Hepatitis can lead to cirrhosis and loss of liver function. Furthermore, it can also lead to liver cancer. In fact, Hepatitis B and C are the major risk factors for liver cancer in the US (Ly et al., 2012).

9.4. Environmental Factors and Physical Health

Section Learning Objectives

- To learn the impact of marriage on one's physical and mental well-being.
- To learn how parenthood might affect one's mental health
- To identify the moderators that account for the variability of mental health issues in parenthood
- To understand the gender differences in the relationship between bereavement and physical and mental health

We have already discussed behavioral factors that contribute to one's physical well-being, but what about environmental factors? We know that stress in one's environment can lead to an increased likelihood of engaging in negative behaviors such as poor nutrition, increase use of substances (i.e. smoking and alcohol consumption), and a reduced likelihood of engaging in physical activity. Therefore, the purpose of this section is to identify some of these environmental factors that may negatively contribute

to one's overall well-being, as well as discuss any gender discrepancies observed within these factors.



9.4.1. Marriage/Relationships

Research continually supports that marriage is a resource that promotes and protects against health disorders. While marital status does not predict mortality, never married individuals have a 158% increase in mortality compared to married individuals. Interestingly, this difference was larger for men than women, with unmarried men being at risk for increased mortality rates of infection and accidents (Kaplan & Kronick, 2006). Additional studies implied that not being married placed men at an increased risk for death compared to unmarried women.

When assessing health factors, married individuals have less reported depression than unmarried individuals. The difference between married and unmarried depression rates are greater in men than women. Married individuals are also less likely to experience a stroke compared to unmarried individuals. Similarly, this relationship is also stronger in men than women (Maselko et al., 2009). It would appear from multiple sources and studies that marriage offers more benefits for men than women.

In efforts to identify specific factors that contribute to the benefits of marriage, researchers examined health disparities among married, unmarried, and unmarried but cohabitating individuals. Overall, studies have found that cohabitation does not offer the same amount of support as marriage. For example, cohabitating individuals report more depression than married individuals, but less than widowed or divorced individuals (Brown, Bulanda, & Lee, 2005). This would imply that there are some benefits to cohabitating, although it does not appear as beneficial as marriage.

Research on same-sex relationships is more limited than heterosexual couples, however, Weinke and Hill (2009) compared happiness of heterosexual married, cohabitating, single, and "other" with same-sex individuals who were cohabitating and single. Findings indicated that heterosexual married individuals were the happiest, followed by heterosexual cohabitating and then same-sex partners cohabitating. Heterosexual single and "other" were nearly the same in men and women, and same-sex single men and women reported the lowest levels of happiness. While there are obviously external factors that may contribute to these individual's happiness, it is worth noting that heterosexual married individuals reported highest levels of happiness, whereas same-sex single individuals were the least happy.

9.4.1.1 Dissolution of marriage. Just as it is important to discuss the impact of marriage on health behaviors, it's also important to discuss the impact of a dissolution of a marriage through either divorce (death is covered in section 9.4.3). While marriage appears to provide a protective factor on heath and psychological well-being, separation/divorce may be related to a decline in physical and mental health. Molloy and colleagues (2009) found that individuals who were separated/divorced had reported worse overall health than their married counterparts. These marital transitions are correlated with adverse health effects that appear to impact men more negatively than women. More specifically, Hughes and Waite (2009) found that divorce was related to an increase in mortality and psychological distress for men, but not women. Despite the decline in health for divorced or separated men, unmarried men had worse health outcomes than men who experienced a relationship status change suggesting that marriage, even if not for the remainder of their life, provides some health benefits (Hughes & Waite, 2009).

Researchers argue that it's important to acknowledge that gender differences in response to the end of a marriage impact men and women differently, most noticeably by changes in roles within the household. Women tend to make a greater economical shift post-divorce, thus it is not surprising that women report a greater financial strain. In fact, men's income decreases roughly 10% post-divorce compared to a 33% decrease in women's income (Avellar & Smock, 2005). However, men report a significant strain in social support compared to women. This shift is often explained by the fact that wives are typically married men's primary source of support, thus, losing this support after their divorce.

Another argument as to why men appear to have more adverse health effects post dissolution of marriage is due to initiation of break-up. Women are more likely than men to initiate a divorce. This is not surprising as women also report less satisfaction than men within a marriage (Bodenmann, Ledermann, & Bradbury, 2007). Therefore, one might assume that because women are more dissatisfied, they may be more aware of problems within the relationship, thus more adjusted by the time the marriage ends.

9.4.1.2. Quality of marital relationship. It is important that we also assess the impact of the quality of a marital relationship as we all know not all marriages (or relationships) are the same. Some relationships offer high levels of support, whereas others are more toxic than helpful. Research on the impact of the quality of a marriage suggests unhappily married men and women are more depressed than their unmarried counterparts (O'Leary, Christian, & Mendell, 1994). Furthermore, married people who reported high levels of dissatisfaction on how their spouse treated them also reported more distress than unmarried individuals (Hagedoorn et al., 2006). Additionally, unhappily married people displayed increased blood pressure compared to both happily married and single individuals (Holt-Lunstad, Birmingham, & Jones, 2008). These findings suggest that researchers need to take into consideration the quality of the marriage when assessing the impact marriage has on the psychological and health of individuals.

9.4.1.3. Factors explaining gender differences in marriage. There are many factors that may explain the differing effect marriage has on men and women's health behaviors. The first is social support. Married men and women report higher levels of social support than unmarried individuals, however, husbands receive more social support from their wives than wives receive from their husbands (Goldzweig et al., 2009). Women may make up for this lack of support by establishing a social support network from friends. This additional network may also explain why men who live alone become more depressed than women living alone due to the lack of external support.

Health behaviors is another factor that also appears to benefit married men. More specifically, married men are more likely to utilize preventative care and take care of themselves when sick than unmarried men (Markey et al., 2005). Interestingly, unmarried men also report drinking more alcohol than married men while there does not appear to be a difference in drinking behavior between married and unmarried women. With regards to smoking behaviors, unmarried men and women reportedly smoke more than married men and women (Molloy et al., 2009). From these findings, it appears that men take more responsibility for their health in married relationships than unmarried relationships which may also explain married men's overall better health status.

Finally, marital satisfaction has also been identified as a potential factor that may impact a married individual's health status. Research continually identifies that women are more dissatisfied in their marriage than men. Women report more problems in marriage, more negative feelings about marriage, and more frequent thoughts on divorce (Kurdeck, 2005). Some argue that women become more dissatisfied with the marriage due to gender roles, particularly after the couple has children. Many women take on majority of the child-care responsibility either in addition to their employment, or, leave their employment to take care of the children full-time. In either case, the woman's role in the marriage is more affected than the man's once the couple has children.

9.4.2. Parenting

As previously discussed, gender roles have been identified as one of the main factors contributing to the differences in health outcomes between genders. Although we have seen an increase in men's involvement in parenting, women still remain the primary care takers of children, even when working outside of the home.

It is also important to identify that due to an increased divorce rate, as well as an increase in nonmarried women having children, there has been a significant decrease in the number of two parent households. According to the US Census Bureau, 69% of children under age 18 live in a 2-parent household. This number has continually dropped since 1960 when 88% of children lived in a 2-parent household. The current statistics for children living with a single parent has also risen over the years, with 23% of children currently living with a single mother (United States Census Bureau, 2019).

Women in general are not having as many children as they have in the past. Not only has the number of women choosing not to have children increase over the past decade, so has the total number of children born to a woman. The average number of kids

in the home has decreased to an average of 1.9 kids in a US family. The average number of children in the home has hovered just under 2 since 1977 (Statista, 2019). It is suspected that the decrease in number of children is due in large part to improved contraceptives, as well as an increase in women in the workforce. In fact, 62% of children have mothers working in the workforce. Despite this increase in women working, findings suggest that parents spend as much time with their kids as they did 20 years ago (Galinsky et al., 2009). The stability of this statistic is attributed to an increase in the ability to telework!

9.4.2.1. Effects of parenthood on health. The research on the effects of parenthood on one's mental and physical health are completely mixed. Some argue that parental status is unrelated to psychological well-being (Bond, Galinsky, & Swanberg, 1998). In fact, several studies cite no relationship between parenthood and depressive symptoms in a wide range of different groups of parents (e.g. single parents, empty nesters; Evenson & Simon, 2005). On the flip side, other studies have found an elevated rate of depression in mothers, but not fathers, and that single mothers may be the most at risk (Bebbington et al., 1998; Targosz et al., 2003). Other studies have found single fathers are more at risk for developing an alcohol abuse problem than married fathers (Evenson & Simon, 2005)

The problem with studies assessing the relationship between parenthood and mental health is there are a host of moderating variables that impact this relationship. Take for example the increased risk for single mothers to develop depression. Is this increased risk truly due to being a parent? Or is it related to being a *single* parent? What about the financial stress of being a single parent? Lack of social support? This unfortunately is a common issue among research in this domain. Other moderators such as employment status, age of parent, and health of child are among the most commonly overlooked moderators. For example, prevalence rate for depression among single and supported mothers differed in the age group of 25 to 50 years. Women who have full-time employment outside of the home report higher impairment than women who work part-time (Bebbington, 1996). Finally, parents of children with a significant disability also report poorer health than those with healthy children (Ha et al., 2008). Given these studies and the mix of information, one can conclude that parenthood does affect one's physical and mental health, however, the extent of the effects are determined by a host of moderating variables.



9.4.3. Bereavement

Given the discussed benefits of marriage for both men and women, one would assume that the loss of a spouse would result in significant adverse health effects for both men and women. While this is generally the case, the effect of widowhood appears to have a more negative health effect on men's health than women's (Stroebe, Schut, & Stroebe, 2007). Following the death of a spouse, there is an increase in men's mortality rate. In fact, the mortality rate for men is higher if widowed than married, however, the mortality rate for women is lower if widowed than married (Pizzetti & Manfredini, 2008).

One explanation for the gender differences with regards to effect of bereavement on overall health is daily stressors. After a spouse dies, women report experiencing more financial stress, whereas men report stress with household chores. This financial stress may be alleviated in time, however, household tasks need to be completed immediately.

Gender roles may also explain differences in response to the death of a spouse. For example, women are more likely to fulfill a

caregiver role to the spouse, particularly if he is ill just prior to his death. Researchers argue that in the death of one's husband, the role of caregiver is immediately removed, thus removing a daily stressor from a woman's daily life, thus improving overall health.

Social support is another factor that is observed differently in men and women. More specifically, men rely more on their spouse for social support than women do. Women typically receive more of their social support from close friends; thus, the death of a spouse does not affect their support as much as it would for a man. This increase support outside of home for women is likely due to their willingness and desire to seek out support more than men. Men are also more likely to lose the established social support after widowhood as women are generally responsible for establishing and maintaining social engagements with friends and family. Carr and colleagues (2004) supported these theories by reporting that men were more interested in remarriage *only* when they lack social support from friends. Furthermore, social support mediated the relationship between gender and desire to remarry. More specifically, men were significantly more likely to want to remarry than women when receiving low levels of social support; however, there was not a difference in men and women's desirability to remarry when both received high levels of social support.

9.4.3.1. Factors effecting bereavement research. These findings should be taken with caution as there are many issues with studies evaluating health of individuals following widowhood. One such issue is that healthier individuals are more likely to remarry after becoming widowed, and therefore, do not remain a widow for an extended period of time. These individuals may be excluded from specific studies, thus impacting the actual health findings of individuals post death of a spouse. Additionally, when individuals are recruited for a study, it is important that researchers control for the length of time since becoming a widow. As one can imagine, there could be varying degrees of coping that could impact an individual's overall health.

Another important factor that researchers identify as an issue with bereavement studies is the inability to control for factors that may be contributing to one's health issues that occurred prior to the death of their spouse. The only way to control for this issue is through prospective studies where individuals are assessed for years prior to the death of their spouse, and then reassessed at given time points post death. As you can imagine, this is not the best use of resources as the sample size would have to be very large. Additionally, you may be collecting data on individuals for many years as one cannot predict when someone's life is likely to end. Some researchers argue that you could recruit individuals who engage in behaviors that are related to a higher likelihood of an early death, but that also presents confounds to the study as well.

Module Recap

As you can see, there are many factors that contribute to one's health. We discussed the gender paradox that while women are more likely to be diagnosed with an illness, they are also less likely to die than men. This can be attributed to a host of things including better preventative care, as well as a longer life span. In addition to differences in mortality rates across genders, ethnicities, and countries, we also discussed the gender differences in two of the US leading causes of death: cardiovascular disease and cancer. We discussed the implications of both a positive health behavior (physical activity) as well as several negative health behaviors (obesity, alcohol, smoking, and drug use). These negative behaviors can have significant impact on both physical and mental well-being. Finally, we discussed the impact of environmental factors such as marriage, parenthood, and bereavement on one's physical health. Furthermore, we discussed how the implications of these factors are different for men and women.

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4.2: Module 10 – Gender Through a Clinical Psychology Lens

Module 10: Gender Through a Clinical Psychology Lens

Module Overview

If you've taken Abnormal Psychology, you already know that there are discrepancies among diagnosis rate of mental health disorders between men and women. These differences have been attributed to biological differences, environmental differences, as well as methodological differences in data collection and symptom description. Therefore, the focus of this Module is to identify gender discrepancies amongst clinical psychology disorders and discuss possible explanations why these differences occur.

Module Outline

- 10.1. Methodological Artifact
- 10.2. Clinical Disorders
- 10.3. Suicide
- 10.4. Gender and Mental Health Treatment

Module Learning Outcomes

- To understand how methodological artifact contribute to the gender bias in diagnosis of mental health disorders
- To identify the gender discrepancies in rate of diagnosis for Major Depression Disorder, Anxiety Related Disorders, PTSD, and Eating Disorders
- To understand various cognitive, social, and biological variables that contribute to the gender differences in selected mental health disorders
- To understand the gender paradox of suicide
- To understand variables that contribute to gender differences in seeking mental health treatment

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10.1. Methodological Artifact

Section Learning Objectives

- To increase understanding of how methodological artifacts contribute to gender bias in clinical psychology
- To increase understanding and identification of the types of clinician bias and how they impact diagnosis rate of mental health disorders
- To increase understanding of how response bias can impact diagnosis rate of mental health disorders

Before we discuss gender differences among clinical disorders, first we must discuss possible explanations of these differences aside from gender specific factors. There are three proposed theories regarding the difference in diagnosis rate between genders. The first two are suggestive of **methodological artifact**, or the belief that findings are not reflective of real-world data, but rather, an unintended consequence of methodological artefact (encyclopedia.com). Two methodological ways this can occur is through **clinician bias** and **response bias**. The final theory is that manifestation of symptoms are different among men and women, and instruments such as questionnaires are biased to these symptoms.

10.1.1. Clinician Bias

Have you ever met someone and made a judgement about them on the first meeting only to find out several days (months, years, etc.) later that your initial assessment of them was wrong? Unfortunately, this can also happen to clinicians. The diagnosis of a psychological disorder requires the clinician to gather information from the patient, interpret the information along with their own observations, and determine whether or not the patient meets criteria for a diagnosis. This assessment is usually completed

within the first couple of sessions when clinicians have very little information about their patient. Clinicians are required to use their informal and subjective method of arranging client data to formulate a diagnosis and treatment plan (Grove et al., 2000). Unfortunately, through this process, clinician judgement and thus subjective bias may occur, thus influencing the diagnosis.

While there are many different types of clinician biases, among the most common are pathology bias, confirmatory bias, and over-confidence in clinical judgement (Moran & Tai, ??). **Pathology bias** suggests that clinicians may develop a bias to look for psychopathology as their clinical training and experience has emphasized finding disorders (Shemberg & Doherty, 1999). This is especially problematic in settings where individuals are influenced to display psychopathology such as in residential psychiatric settings.

Confirmatory bias also influences making inaccurate diagnoses as clinicians may have the tendency to only recall information that supports a diagnosis (Shemberg & Doherty, 1999). This is problematic in that clinicians will use this information to support their diagnosis, but not use data to refute their hypothesis, thus altering the true presentation of symptoms (Garb, 1998).

Finally, **over-confidence bias** occurs when clinicians become too confident in their subjective psychological assessments (Moran & Tai, ???). While rarely observed in new clinicians, this bias often occurs in seasoned clinicians who believe that more experience influences more effectiveness and accuracy in clinical judgment (Groth-Marnat, 2000).

10.1.2. Response Bias

To complicate the situation even more, in addition to clinician bias is patient response bias. A patient is responsible for providing information about themselves, including presenting symptoms. Unfortunately, some patients have a tendency to respond inaccurately or falsely to questions. While some of these errors may be unconscious, others may be intentional to prevent a specific diagnosis.

Studies have indicated that there are sex differences in attitudes toward various disorders such as depression. Individuals tend to associate depression as a “feminine” diagnosis, and thus, may lead male patients to underreport symptoms (Page & Bennesch, 1993). This also exceeds beyond depression as studies have shown both males and females are less willing to work with males than females with mental health disorders (Schnittker, 2000). Due to these cultural barriers, males may underreport their mental health symptoms to avoid stigmas.

10.2. Clinical Disorders

Section Learning Objectives

- To increase knowledge of prevalence rates of Major Depression Disorder in the US
- To increase understanding of the different variables that contribute to the gender differences in Major Depression Disorder
- To increase knowledge of prevalence rates of Anxiety Disorders in the US
- To increase understanding of the different variables that contribute to the gender differences in Anxiety Disorders
- To increase knowledge of prevalence rates of PTSD in the US
- To increase understanding of the different variables that contribute to the gender differences in PTSD
- To increase knowledge of prevalence rates of Eating Disorders in the US
- To increase understanding of the different variables that contribute to the gender differences in Eating Disorders

In this section we will explore a few clinical disorders with gender variations in both diagnosis rate, as well as symptom presentation. Discussing gender differences among all disorders is beyond the scope of this course, however, if you are interested to learn more about the prevalence rate of mental health disorders to can read the Abnormal Psychology OER textbook available within Pressbooks.



10.2.1. Major Depression Disorder

According to epidemiological research, there is no significant gender difference in Major Depressive Disorder (MDD) during childhood; however, by young adulthood, girls are twice as likely to be depressed as boys and report approximately twice as many depressive symptoms as boys, a difference that holds in both community and clinical samples, even when accounting for gender differences in help-seeking behavior (Nolen-Hoeksema, 1987). While this discrepancy holds true until age 55, research exploring gender differences of MDD prevalence rates in older adults is inconclusive, with some reporting a continuation of this discrepancy and others failing to report any difference between genders among older adults.

Researchers have identified several reasons why studying prevalence rates of disorders among males and females is difficult. One recurring reason is the difference in symptom presentation among genders. Kahn and colleagues (2002) evaluated male/female twins and depressive symptoms. Findings indicated that females reported more fatigue symptoms such as excessive sleep, slowed speech and body movements whereas males reported more hyperactive symptoms including insomnia and agitation. The findings are consistent with additional studies that indicate women more often report “passive” symptoms such as sadness, lethargy, and crying whereas men tend to associate depression with alcohol use. Due to the discrepancy in symptoms, it is not surprising that depression is more likely related to alcohol problems in males than females (Marcus et al., 2008). These findings are consistent when assessing for substance abuse disorders in general, with men more likely than women to not only have a substance abuse problem, but to also have a comorbid diagnosis of depression (Lai, Cleary, Sitharthan, & Hunt, 2005). This comorbidity not only complicated treatment for depression, but also willingness to seek mental health treatment in general.

10.2.1.1. Cognitive variables. Research regarding onset and treatment of depression routinely identifies the involvement of cognitive variables. Factors such as rumination and attributional style are among the most common factors assessed in gender research with regards to MDD. These factors not only explain differences in how males and females assess negative situations, but they also help clinicians to identify treatment interventions aimed specifically at factors contributing to an increase in depressive symptoms.

Rumination, or the response to negative moods by dwelling on them as opposed to problem-solving or distracting oneself, has been known to mediate the relationship between interpersonal stress and depression. More specifically, individuals with interpersonal stress and high levels of rumination report higher levels of depression than those with interpersonal stress and low levels of rumination (Lyubomirsky, Layous, & Nelson, 2015). When examining rumination with regards to gender, researchers routinely report that ruminating behaviors are more commonly observed in girls than boys (Johnson & Whisman, 2013; Rood et al., 2009; Grant et al., 2004). Given these findings, it should not come as a surprise that rumination also mediates depression within girls specifically, with girls experiencing higher levels of rumination also reporting higher levels of depression (Hamilton, Stange, Abramson, & Alloy, 2014). Interestingly enough, the relationship between males and rumination is the same, with males reporting higher levels of rumination also reporting significantly more symptoms of depression. Therefore, the pathway of increased ruminating thoughts leading to an increase of depressive symptoms appears to be the same in boys and girls, however, girls are more likely than boys to engage in ruminating thoughts in daily events.

Co-rumination, which is defined as a passive discussion of negative emotions and events with close friends is also observed more frequently in girls than boys (Barstead, Bouchard, & Shih, 2013; Bouchard & Shih, 2013; Rose, 2002). Unlike rumination where the relationship between increased ruminating thoughts and increased depressive symptoms did not differ between boys and girls, co-rumination appears to have a gender discrepancy. More specifically, engaging in co-rumination is correlated with increased depressive symptoms in girls, but NOT in boys (Rose, Carlson, & Waller, 2007).

In addition to ruminating on situations, one's **attributional style,** or the way one interprets causes of events, has also been supported as a mediational variable to depression. More specifically individuals who attribute causes of events as *internal*, *global*, and *stable* are more likely to be depressed than those who view events as external, specific, and unstable (Morris, Ciesla & Garber, 2008). Researchers find that not only are girls more likely to attribute situations as internal, global, and stable, but they are also more likely to develop depressive symptoms from this attributional style than their male peers (Mezulis, Funasaki, Charbonneau, & Hyde, 2010). Thus, attributional style can predict depressive symptoms in girls but generally not in boys.

Another cognitive vulnerability that is liked to depression with regards to gender discrepancy is **interpersonal orientation**, or the tendency to behave in certain ways around people. Girls, more than boys, affiliate needs and define themselves more in relational terms (Brody & Hall, 2010; Rose & Rudolph, 2006). Because of this need to establish specific relationships, girls report both more frequent and more intense stress related to interpersonal orientation. Interpersonal orientation has also been linked to adolescent girls increased risk for developing depression due in large part to peer relationships. In fact, adolescent girls with friends who are depressed are more likely to develop depression; this finding has not been proven in their male peers (Giletta et al., 2011; Prinstein et al., 2005).

Why does interpersonal orientation not effect boys? The short answer: it does; however, girls, more than boys, are more concerned about what peers think of them, and therefore, effects girls more often than boys. In fact, deficits in peer approval are strongly associated with emotional distress in girls but not boys (Rudolph, Caldwell & Conley, 2005). Furthermore, girls are more reactive to relationship problems than boys. The combination of placing more emphasis on relationships, as well as being more responsive to relationship problems, may explain why there is a gender difference in depression even among young children and adolescents (Rudolph, 2009).



10.2.1.2. Stress and coping. In addition to cognitive vulnerabilities, stress and coping of various life events also contributes to the development of MDD. Observed gender differences in both frequency of and sensitivity to various life events is one possible explanation for the gender difference in depression diagnoses. Findings suggest that adolescent girls experience more stressful life events than boys AND rate these stressors with higher intensity than boys (Hankin, Mermelstein, & Roesch, 2007; Hammen, 2009; Seiffge-Krene, Aunola, & Nurmi, 2009). These findings are consistent in both the home and social setting. More specifically, girls who experience family discord report more symptoms of depression than boys and are at an increased risk for a depression diagnosis (Crawford, Cohen, Midlarsky, & Brook, 2001; Essex, Klein, Cho, & Kraemer, 2003). As stated above, girls also experience more stressful situations with peer relationships which has also been linked to increased depressive symptoms.

One explanation of the differences in depression rate and stress is the HPA axis. As previously discussed in Module 8, women are more likely to have a dysregulated HPA axis, and therefore, are more susceptible to negatively interpreting stressful situations

than men (Nolen-Hoeksema, 2001). Additionally, hormonal changes are also known to trigger HPA dysregulation, thus making women more vulnerable to depression, particularly after stressful situations. The role of the HPA axis in combination with one's coping style may predispose women to a susceptibility of depression.

10.2.1.3. Biological variables. We already discussed the role of sex hormones in the development of various behaviors in Module 8, however, it is worth noting that those hormones are also important in the gender difference of depression diagnosis. The biological changes during puberty are related to an increase in sex hormones; however, levels of sex hormones alone do not account for the difference in depression diagnoses (Angold, Costello, Erkanli & Worthman, 1999; Brooks-Gunn & Warren, 1989). Research indicates that the onset of puberty in girls is closely linked with depressive symptoms, with early onset puberty in girls being more at risk for developing depression; these findings have been mixed for boys, with no clear distinction of how onset of puberty may or may not affect depression symptoms (Crick & Zahn-Waxler, 2003; DeRose, Wright & Brooks-Gunn, 2006; Graber, Seely, Brooks-Gunn, & Lewinsohn, 2004; Mendle, Harden, Brooks-Gunn, & Graber, 2010).

One possible explanation for the relationship between early onset puberty and increased risk for depression is the fact that physical changes that occur during puberty are negatively perceived by girls (Stice, Presnell, & Bearman, 2001). Furthermore, secondary sex characteristics that occur during puberty are seen as less desirable, particularly in Western cultures that value thinness (Richards, Boxer, Petersen, & Albrecht, 1990). These values can lead to negative body image, which has also been predictive of increased depression symptoms (Ohring, Graber, & Brooks-Gunn, 20002; Stice & Bearman, 2001).



10.2.2. Anxiety Disorders

Anxiety disorders are the most common class of mental disorders with an estimated 19% of US adults experiencing some anxiety disorder in the past year (NIMH). Similar to depression, women are nearly twice as likely to develop an anxiety disorder than men across the lifespan across all anxiety related disorders. In fact, by the age of 6, anxiety levels in girls are twice as high as in boys (Howell, Brawman-Mintzer, Monnier & Yonkers, 2001). The current prevalence rate for any anxiety disorder for adult females is 23.4%, and 14.3% for males. This discrepancy is similar in adolescents, with overall higher rates of anxiety reported in adolescent samples (38.0% females, 26.1% for males).

When examining specific anxiety related disorders, women are more commonly diagnosed with panic disorder, agoraphobia, specific phobias, generalized anxiety disorder, and both acute and post-traumatic stress disorder (Gum, King-Kallimanis & Kohn, 2009; Bekker & van Mens-Verhulst, 2007; McLean, Asnaani, Litz, & Hofmann, 2011). However, the sex differences are less pronounced (and sometimes not statistically significant) for social anxiety disorder and obsessive-compulsive disorder (Bekker & van Mens-Verhulst, 2007; McLean & Anderson, 2009). Psychosocial, as well as genetic and neurobiological factors, likely contribute to the higher prevalence rate in women (Bandelow & Domschke, 2015).

The statistical difference between prevalence rates among genders is similar across all anxiety related disorders. Anxiety disorders represent a significant source of disability, especially for women. They are associated with more missed work days for women, but not men. This may be related to a greater comorbidity of anxiety disorders among women, and thus more severe

psychopathology in general. Interestingly enough, men but not women, were more likely to visit a professional for either an emotional or substance use issue in the past year if they had an anxiety disorder (McLean, Asnaanin, Litz & Hofmann, 2011).

10.2.2.1. Biological variables. There are a few theories that attempt to explain the difference in prevalence rates among anxiety disorders. Anatomically speaking, there may be structural and functional sex differences in brain regions relevant to anxiety. More specifically, there may be a difference in male and female brains involvement in learning, memory, fear conditioning, and fear extinction. For example, a study exploring blood pressure and pulse found women are more physiologically responsive than men when presented with potentially anxiety provoking situations (Altemus, 2006). Researchers argue that this finding may indicate that women are more easily conditioned to fearful stimuli than males (Farrell, Sengelaub & Wellman, 2013). Given the appeared differences in fear conditioning, researchers have also argued that there may be a gender difference in fear extinction, thus impacting how the two genders respond to treatment of anxiety disorders.

Biologically, gonad hormones also play a role in the development and maintenance of anxiety symptoms. In women, estrogen and progesterone have been found to effect function of the anxiety related neurotransmitter systems, which in return, effect fear extinction (Lebron-Milad & Milad, 2012; Pigott, 1999). In fact, a study exploring the effects of long-term oral contraceptive use has been shown to alter the reactivity of the HPA axis in response to psychological stress (Biondi & Picardi, 1999). Testosterone also appears to play a role in the development of anxiety related symptoms. More specifically, testosterone has been linked to reduced responsiveness to stress and suppressing activity of the hypothalamic pituitary adrenal axis- the area responsible for our central stress response system. Although not as extensively researched as estrogen and progesterone, it does appear that gonad hormones likely account for some of the prevalence rate difference in anxiety related disorders.

10.2.2.2. Gender roles. One must also explore the role of gender roles in the development of anxiety related symptoms. When masculinity and femininity were measured on a single scale, higher levels of masculinity traits were negatively correlated with anxiety symptoms (Gall, 1969). Another study exploring the role of femininity and masculinity and anxiety symptoms found no relationship with femininity and anxiety symptoms; however, masculinity was negatively associated with anxiety and avoidance behaviors (Moscovitch, Hofmann & Litz, 2005). These findings were further supported when controlling for masculinity characteristics. More specifically, gender was not associated with avoidance in anxiety patients when controlling for masculinity characteristics, suggesting masculinity characteristics being largely responsible for these gender differences in avoidance and anxiety symptoms. All together, these studies implicate a relationship between masculinity traits and anxiety symptoms, with high levels of masculine traits regardless of gender correlating to lower reported anxiety symptoms. (Chambless & Mason, 1986).

Some researchers argue that due to gender stereotypes of anxiety symptoms, men may underreport symptoms, thus leading to a reporting bias. This is supported by an increase in fear reports in males (and not females) when examined via a physiological fear response. More specifically, although men were not reporting significant levels of anxiety related symptoms, physiological responses to stressful situations indicated heightened arousal that researchers linked to anxious behaviors (Pierce & Kirkpatrick, 1992). Researchers argue that due to social desirability, boys are more often encouraged to confront feared objects which leads to a greater exposure and extinction of fear responses, whereas girls are more supported in avoidance behaviors. This coupled with increased rumination may lead to more anxiety behaviors in girls across the lifespan (McLean & Anderson, 2009). Furthermore, women are at an increased risk of being exposed to traumatic events such as domestic abuse and sexual traumas, thus increasing the likelihood of developing anxiety related symptoms.



10.2.3. Posttraumatic Stress Disorder (PTSD)

Post-Traumatic Stress Disorder (PTSD) affects nearly 52 million Americans with a lifetime prevalence rate of 6.8%. Similar to both depression and anxiety disorders, women are more than twice as likely as men to develop PTSD at some point in their life. The lifetime prevalence rate for women is 9.7% and for men is 3.6% (NIMH,2019). While research on PTSD in children and adolescents is not as extensive as it is in adults, the minimal findings suggest a similar gender discrepancy with 8% of adolescent females meeting criteria for PTSD versus 2.3% of males.

Not only are women more likely to develop PTSD, but they also report a longer duration of posttraumatic stress symptoms (4 years for females vs. 1 year for males; Breslau, Davis, Andreski, Peterson & Schultz, 1997). This discrepancy may be due to the different types of traumatic events experienced. For example, men are more likely to experience traumatic events such as accidents, natural disasters, man-made disasters, and military combat whereas women tend to experience events related to sexual assault, sexual abuse, and domestic violence (Breslau & Anthony, 2007). Research indicates that despite differences in exposure to different stressors, women are still more likely to develop PTSD symptoms. For example, when men and women were assessed after a recent earthquake, women reported higher levels of posttraumatic stress symptoms than men (Carmassi and Dell'Osso, 2016). This study was also replicated with motor vehicle accidents (Fullerton et al., 2001) and terrorism (Server et al., 2008). So, if exposure to different stressful events does not account for the gender variance, then what does?

10.2.3.1. Biological variables. The natural biological response to a stress or threat involves a complex interaction within the HPA axis, allowing for the individual to prepare to the stressor, and then return to baseline once the threat is over. As we discussed in Module 8, cortisol, the main hormone produced in a stress response, is produced by the adrenal glands in activation of the HPA axis. While research on cortisol levels during stressful or threatening situations is mixed, the general pathway suggests that production of cortisol is increased when the individual is under distress in efforts to help the individual "fight or flight" the stressful event. During periods of prolonged stress, the HPA axis undergoes significant dysregulation in efforts to produce the cortisol response (Chrousos, 2009).

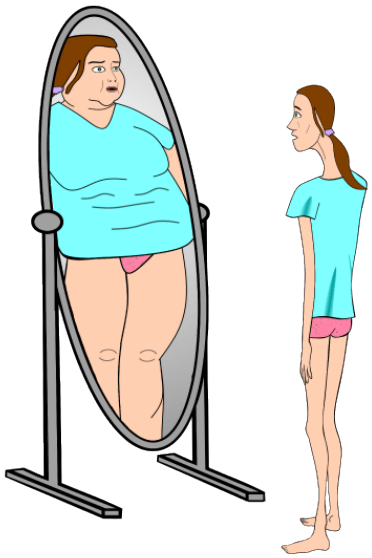
Assessment of basal cortisol levels in healthy men and women suggest that women have lower cortisol levels than men, however, women demonstrate a slower cortisol negative feedback than men suggesting women experience prolonged physiological stress than men (Bangasser, 2013; Van Cauter et al., 1996). When examining corticotropin-releasing factor (CRF), the hormone responsible for initiating the HPA axis response that ultimately releases cortisol, women show greater expression of CRF than men. This finding has also been replicated in animal studies that show a sex differences in CRF receptor binding, signaling, and trafficking. Therefore, the fact that women are twice as likely than men to develop PTSD may be due to an underlying biological predisposition (Bangasser, 2013).

Salivary cortisol levels also appear to be different in men and women with diagnosed PTSD. More specifically, women with PTSD appear to have lower levels of salivary cortisol that decreased over time, whereas men with PTSD have higher levels that increased over time (Freidenberg et al., 2010). Gender difference in cortisol levels in response to trauma is also observed in children with PTSD, with girl cortisol levels recorded higher than boys. Conversely, cortisol levels were higher in male but not female survivors

of the World Trade Center attack (Dekel et al., 2013).

So, what accounts for the differences in basal cortisol and glucocorticoid negative feedback? Research indicates production of estrogen may account for these gender differences, which may also explain why girls initially have higher rates of cortisol but then as adults, have lower levels. Researchers have found via animal models that stress during adolescence (where there is a surge of gonadal hormones) impacts HPA axis reactivity and is associated with different behavioral responses in males and females (Viveros et al., 2012). Additionally, estrogen and menstrual cycle position have also been linked with intrusive memories (Cheung et al., 2013) fear inhibition and extinction (Glover et al., 2012, 2013) suggesting female hormone production may have a greater impact on women's development of post-traumatic stress symptoms, as well as the biological mechanisms that facilitate stress response.

10.2.3.2. Cognitive variables. One of the diagnostic criteria symptoms of PTSD is intrusive recollection, or re-experiencing, of the traumatic event. Researchers have repeatedly found that these re-experiences, particularly the physiological reactivity related to the re-experiencing, were central to the development and maintenance of additional PTSD symptoms (Armour et al., 2017; McNally et al., 2017). Further studies found that increased re-experiencing of the traumatic event via dreams or distressing recollections initially following the trauma was predictive of PTSD six months after the traumatic event (Haag et al., 2017). Gender studies examining re-experiencing of symptoms identified women as having a higher level of both re-experiencing symptoms post-traumatic event, as well as a higher physical reactivity when remembering the incident (Fullerton et al., 2001; Stuber et al., 2006). Therefore, the fact that women report both increased re-experiencing and hyperarousal immediately following a traumatic event may explain why PTSD symptoms are more pronounced in women.



10.2.4. Eating Disorders

According to the DSM-V, there are three types of eating disorders- Anorexia Nervosa, Bulimia Nervosa, and Binge Eating Disorder. *Anorexia nervosa* involves the restriction of energy (i.e. food) that leads to a significantly low body weight for age, sex, and developmental status. These individuals have an intense fear of gaining weight or becoming fat, along with significant disturbance in their body evaluation. *Bulimia nervosa* involves recurrent episodes of binge eating followed by recurrent inappropriate compensatory behaviors in order to prevent weight gain. Finally, *Binge Eating Disorder* involves recurrent episodes of binge eating but do not engage in compensatory behaviors.

According to the National Eating Disorder Association, nearly 10 million American women and 1 million American men suffer from an eating disorder. Across all three disorders, women are more likely than men to be diagnosed with an eating disorder, however, the smallest gender discrepancy is found in binge eating disorder. Some argue the gender discrepancy is much less across all three eating disorders and that the current rate may be due to artifact as men are less likely to report and seek help for disordered eating behavior (National Eating Disorder Association).

Eating disorders have the highest mortality rate of all mental health disorders, with individuals diagnosed with anorexia nervosa having the highest mortality rate among the three eating disorders. Males may be at an increased risk for death because they are

often diagnosed later due to the stigma associated with males and eating disorders. One interesting discrepancy between males and females' development of eating disorders is weight history. Males who develop eating disorders are more likely to have been mildly to moderately obese at one point in their lives whereas women reported *feeling* fat but usually had a normal weight history (Andersen, 1999).

10.2.4.1 Societal variables. Probably the most prominent theory behind the development of eating disorders is the societal emphasis placed on physical attractiveness and thinness in women. This external variable is often compounded by the fact that women are interpersonally oriented, and thus value society's opinion in their appearance. Unfortunately, society's standards for thinness have grown to be more strict and unrealistic over the past years, largely driven by media, magazines, and television. In fact, frequent magazine reading was associated with an increase in unhealthy weight control measures among female adolescents (van den Berg et al., 2007). These findings have also been replicated in men who read magazines about fitness and muscularity (Hatoum & Belle, 2004).

With the rise in social media over the past decade, individuals have increased access to (often manipulated) images of "ideal bodies." There has been a rise in studies examining the effects of social media on mental health, particularly body image and eating habits. Researchers continue to identify a positive correlational relationship between time spent on social media and eating/body image problems. More specifically, individuals who spent more time on social media also reported increase negative eating behaviors. These findings may be even more significant in individuals who frequently viewed fitspiration images (National Eating Disorder Association). Americans who spend two more hours a day on social media are exposed to more unrealistic ideals of beauty, weight loss stories, body shamming, etc. While research with regards to social media use and eating disorders have failed to examine differences between genders, it is hypothesized that similar to magazine reading, men are also affected by the increased social media use as well.

10.2.4.2 Familial variables. Societal pressures can also come from family and friends. Girls are more likely than boys to receive criticism from parents or close family members to lose weight; however, boys are often pressured by friends and family to gain muscle (Ata et al., 2007). Several studies have also identified that mothers of female eating disorder patients may actually have more impact on disordered eating habits that fathers. More specifically, direct negative maternal comments about weight and appearance may be a more powerful appearance than modeling of weight and shape concerns (Ogden & Steward, 2000). With that said, modeling does appear to have a more significant impact on elementary age girls' weight and shape-related attitudes. Thus, modeling of negative body image at an early age may contribute to the development of an eating disorder while overt comments may exacerbate symptoms in older girls.

Family dynamics has also long been studied with regards to development of eating disorders. Although correlational at best, high levels of enmeshment, intrusive and overly hostile family environments are linked to eating disorders (Minuchin et al., 1978). Unfortunately, research in this area has not explored any differences in family dynamics and gender, therefore, we cannot determine whether enmeshment, intrusive, and overly hostile family environments impact the development of eating disorders in males.

10.2.4.3 Psychological factors. There are many individual factors such as low self-esteem, need for autonomy and control that have been linked to the development of eating disorders. Unfortunately, most if not all of the research with regards to individual characteristics is with an entirely female samples size. Therefore, it is difficult to determine if these factors also contribute to the development of eating disorders in men.

Individuals with eating disorders have a higher frequency of comorbid substance abuse than people who do not have eating disorders. Similarly, those who struggle with substance abuse also report increased disordered eating habits (Dunn, Larimer, & Neighbors, 2002). Interestingly, a gender discrepancy appears to exist with males reporting higher rates of comorbidity than females. More specifically, Costin and colleagues (2007) reported that roughly 57% of males with binge eating disorder struggle with substance abuse compared to only 28% of females with binge eating disorder. The high comorbidity between substance use and eating disorders has been linked to the use of stimulants to control weight. Due to the relationship between stimulants and weight management, treatment for the comorbid diagnoses is very difficult.

One area that is lacking in research but should be addressed is sexual orientation. Interestingly, homosexuality appears to be a risk factor for eating disorders for men, but not women. Furthermore, eating disorders are more common among homosexual men than heterosexual men, but not among lesbians compared to heterosexual women (Peplau et al., 2009). Future research on eating disorders and sexual orientation may help clinicians identify more effective treatment methods, particularly for male patients.

10.3. Suicide

Section Learning Objectives

- To gain a basic understanding of suicide rates in the US
- To increase understanding of the gender paradox in suicide
- To gain a better understanding of the various factors that contribute to suicidal ideation and suicide attempts

Suicide is ranked as the 10th leading cause of death for all ages in the United States. In 2016, it became the second leading cause of death for ages 10-34 and fourth leading cause for ages 35-54. While the government has made a targeted goal to reduce suicide rates by 2020, suicide rates across ages have steadily increased over the past few years (Office of Disease and Health Promotion, 2019). In fact, the age-adjusted suicide rate increased 33% from 10.5 per 100,000 standard population to 14.0 from 1999-2017. Statistics specific to gender identify a higher suicide completion rate in males (18/100,000) than females (11/100,000); however, the rate of suicide over the past decade has increased more drastically for females (53%) than males (26%).

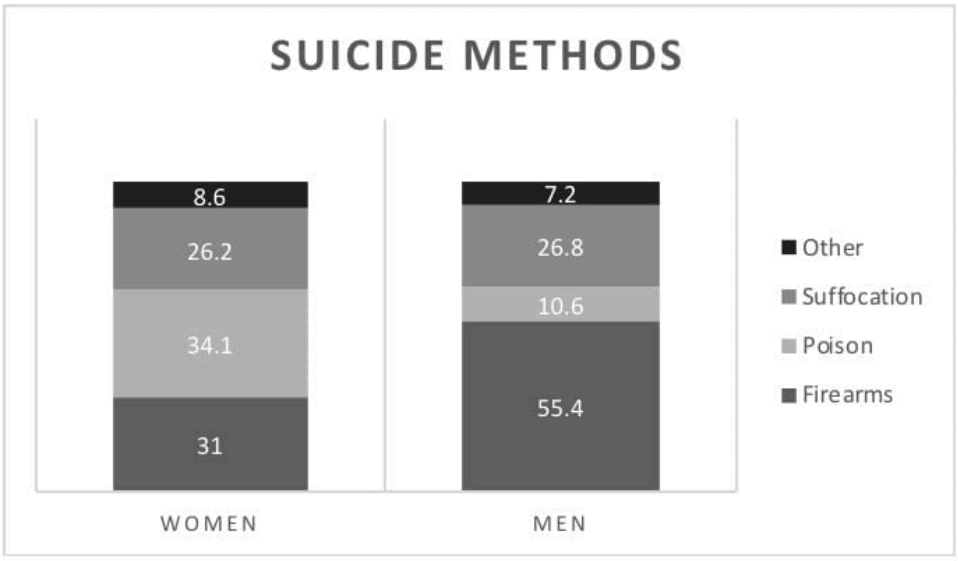
While data continually reflects a discrepancy between genders, some argue that it may be artifact of biased data collection as women are more likely to report suicidal ideation/behavior than men. Conversely, death by suicide is more culturally acceptable for men than women, which also lends itself to another artifact of biased data collection.

10.3.1. Gender Paradox

When breaking down the statistics by gender, there are two trends that consistently hold true in Western cultures 1) females have a higher rate of nonfatal suicidal behavior and 2) males have a higher rate of suicide completion. Researchers have proposed several theories as to why this is the case. Intent of dying is one area that researchers have explored as one would naturally assume that if you have a report of more attempts but fewer completions, the true intent of the attempt would not be completion. This finding has not been consistently supported among researchers, with most studies reporting that the intent on dying is equal in men and women who engage in suicidal behaviors. (Denning, Conwell, King, & Cox, 2010). So, if women are just as intent as men on dying when engaging in suicidal behaviors, what else may explain this paradox?

The method of choice when engaging in suicide behaviors has long been a discussion in the gender paradox. Men are known to use more severe methods such as guns and hanging, whereas women are more likely to use drugs (over the counter and prescription) and carbon monoxide (see Table 10.1; Denning, Conwell, King, & Cox, 2010). Some argue that due to societal pressures, women place a higher emphasis on appearance, thus utilizing methods that ultimately do not affect their appearance.

Table 10.1. Suicide Methods



**Adapted from the Office of Disease Prevention and Health Promotion

The argument that choice of method reflects the intention to die has long been refuted in the literature as there is not a significant difference between men and women's willingness to die with respect to suicidal behaviors (Nordentoft & Branner, 2008). With that said, because women are more likely to use methods more ambiguous methods (medications and poison), the actual rate of women's suicides may be underreported as some deaths may be ruled "accidental."

Cultural attitudes regarding masculinity and suicide has also been proposed as an explanation to the underreporting of men's nonfatal behavior (Canetto & Sakinofsky, 1998). While suicide is not viewed as acceptable in most societies, it is viewed as more acceptable among men than women. Suicide itself is considered a more masculine behavior; however, suicide attempts are considered a more feminine behavior. Therefore, there may be an under representation of the number of suicide attempts/ nonfatal behaviors in men due to the social stigma attached to nonfatal suicide behaviors.

10.3.2. Factors Related to Suicide

There are many factors that have been linked to suicide in both men and women. Most commonly, substance abuse and depression are linked to suicide in adults. One problem with the depression explanation is the possible cyclical relationship between depression and sucicide. More specifically, depression could lead to one engaging in suicidal behavior, however, a failed suicide attempt could also lead to depression. When exploring the relationship between depression and suicidal attempts, depressed men appear to be more at risk for serious suicidal behavior than women. Despite these findings, some researchers express caution in these statistics as they may be representative of artifact of women seeking help for mental illness more than men. This is evidenced by studies that found men who commit suicide are less likely than women who commit suicide to have used mental health services (Payne et al., 2008).

The one exception to the strong link between mental health and suicide attempts with regards to mental health diagnoses is substance abuse. Men who engage in substance abuse are more likely to commit suicide than women. One possible explanation of this finding is that substance abuse, particularly alcohol use, is a more socially acceptable way for men to alleviate symptoms of mental illness (Sher, 2006). Therefore, while women are more likely to seek professional help for mental health problems, men are more likely to "self-medicate" through the use of alcohol.

Relationships are also an important artifact in discussing the gender discrepancy of suicide rates. The risk of suicide is higher in unmarried, divorced, and widowed persons than married persons, with the overall risk being higher for men than women (Payne et al., 2008). Some argue that relationships reflect the lack of social support and that being married and thus receiving social support may be a protective factor against suicide in women. It has been further discussed that from a gender role perspective, women are also required to provide social support in families by taking care of the home, husband, and children, thus making them less likely to engage in serious suicidal behaviors.

In addition to relationships, financial status is also a strong predictor of suicidal behaviors. More specifically, individuals in lower socioeconomic status, those who are unemployed, as well as those that have financial problems are more at risk for suicide (Payne et al., 2008). These findings are more prominent in men than women. One possible explanation for the gender difference in suicidal rates with respect to financial status is related to gender roles. Men are typically viewed as the "bread winners" and the financial providers for the family. Therefore, when they are unable to fulfill this role, they may engage in more suicidal ideation and/or suicidal behaviors. This relationship may also be mediated by depressive symptoms, however, findings in support for this are inconsistent.

Finally, sexual orientation is also linked with suicidal behaviors, with sexual minority persons reporting increased suicidal ideation and attempts than heterosexuals (Payne et al., 2008). While women sexual minorities are at an increased risk for suicidal behaviors, non-heterosexual men are at an increased risk. This may be related to the greater stigma surrounding homosexuality in men, as homosexuality is viewed more acceptable in women than men.

10.4. Gender and Mental Health Treatment

Section Learning Objectives

- To understand factors that contribute to the gender discrepancy in seeking out mental health treatment
- To understand how Male Gender Role and Female Gender Role may impact men and women's utilization of services

According to recent studies, only one-third of individuals who meet diagnostic criteria for a mental health disorder actually seek treatment, with women receiving treatment significantly more often than men (Andrews, Issakidis, & Carter, 2001). In fact, it is

estimated that 1 in 3 women will receive mental health treatment at some point in their life compared to only 1 in 7 men (Collier, 1982). This should not be too surprising as women also seek out medical care more often than men. For example, men are more likely to utilize emergency services with respect to medical needs, whereas women are more likely to seek out appointments with a primary care physician (Husani, 2002; Rhodes & Goering, 1994). Models examining attitudes toward access of mental health treatment suggest that regardless of age and gender, negative attitudes toward treatment are largely responsible for the underutilization of mental health treatment.

Some argue that women have more psychological distress than men, hence the discrepancy in mental health treatment. Unfortunately, this is not the case as studies have shown that despite women seeking counseling more often than men, men report similar if not higher rates of distress than women (Robertson, 2001). Then maybe it's lack of effectiveness in treatment? Again, it is suggested that although women are more likely to seek out treatment, men actually benefit more from the intervention (Hauenstein et al., 2006).

In attempts to better understand why individuals do and do not seek out mental health services, various models have been tested, including the suggestions in the previous paragraph. In more recent years, researchers have explored the impact of gender roles and gender stereotypes, and how they may impact an individual's willingness to seek out treatment. We will briefly discuss how male gender role and feminist theory have impacted mental health treatment among both men and women.

10.4.1 Male Gender Role

Male gender role socialization suggests that in order for men to receive mental health treatment they need to set aside their masculine socialization to seek out this help (Robertson, 2001). More specifically, because of cultural implications of what are considered socially acceptable masculine behaviors versus female behaviors, men are less likely to report emotional distress and seek out help than their female counterparts. This theory was supported in a study that found a significant relationship between adherence to the male gender role and men's help-seeking attitudes and behaviors (Good, Dell, & Mintz, 1989). More specifically, as men's views became less traditional, their desire to seek out psychological help became more positive. Additional studies assessing masculine attitudes and desire to seek help supported these findings with men who scored high on gender role conflict also reported negative views of psychological help-seeking (Wisch, Mahalik, Hayes, & Nutt, 1995).

Gonzalez and colleagues (2005) examined models to determine how age, gender, and ethnicity/race impacted one's attitude toward willingness to seek mental health treatment. Their findings indicated that younger individuals (under 24 years of age) were less willing to seek mental health treatment than their older counterparts. Similarly, men also had a more negative attitude toward mental health treatment and were nearly 50% less likely to seek mental health treatment as compared to females. Interestingly, when they examined an age by gender interaction, they found that younger males (under 24 years of age) were significantly less likely than females to seek mental health treatment. These findings also held consistent for older adults; however, when they examined willingness to seek mental health treatment between younger females (under age 24) and older male age groups (35-44 and 45-54), there was not a significant difference on willingness to seek mental health treatment.

These findings support gender role socialization as women are conditioned to be more accepting of the help-seeking role, and therefore, are more likely to seek assistance when needed. This is also indicted through studies that find men who report more traditional sex role orientation and independence as having more negative attitudes toward seeking mental health treatment (Ortega & Alegria, 2002).



10.4.2. Feminist Psychotherapy

Feminist theory grew out of the women's movement in the 1960's. During this grassroots movement, women identified psychological structures of evaluation as contributing to women's oppression and subordination in society, while also offering scientific rationale for women's secondary social status. In efforts to combat these issues, feminist psychotherapy was founded. The goal of feminist psychotherapy is to identify gender related challenges/stressors that women face as a result of bias, stereotypes, oppression, and discrimination. Through an equal relationship between the therapist and the patient, feminist psychotherapy helps patients to understand social factors that contribute to their issues, help them discover their own identity, and help build on personal strengths. Although labeled as feminist theory, any group that has been marginalized can benefit from feminist psychotherapy as the main goal of treatment is to identify individual strengths and utilize them to feel more powerful in society (Psychology Today).

According to Lenore Walker, there are six tenants of feminist psychotherapy:

1. **Egalitarian relationships:** the equal relationship between patient and therapist models personal responsibility and assertiveness for other relationships
2. **Power:** patients are taught to gain and use power in relationships
3. **Enhancement of strengths:** patients are taught to identify their own strengths and use them effectively
4. **Non-pathology oriented:** patient's problems are seen as coping mechanisms and viewed in their social context
5. **Education:** patients are taught to recognize their cognitions that are detrimental and encouraged to educate themselves for the benefit of all
6. **Acceptance and validation of feelings:** patients are encouraged to self-disclose to remove the we-they barrier of traditional therapeutic relationships

As stated above, the goal of feminist psychotherapy is to encourage change and establish empowerment in women and minority groups. One way therapists do this is by addressing gender issues as they can cause psychological distress and shape one's behavior. If you think about it, we are all affected and influenced by stigmas and stereotypes. Feminist psychotherapy aims to help patients of minority groups to identify these stigmas and stereotypes, while simultaneously challenge them in attempts to help improve the patient's overall mental health.

Of course, as with all types of treatments, there are some limitations and criticisms. While the goal of feminist theory is to provide strength and empowerment to women and minority groups, some therapists may take this too far. Therapists that are too strong in their feminist beliefs may become militant in their views, thereby persuading patients. A feminist therapist should be supportive and challenge a patient's thoughts, not forcefully change a patient's viewpoint. Additionally, some argue that by taking a feminist view on treatment and society, the therapist is not neutral in their beliefs, thus predisposing patients to blame society for their issues rather than taking ownership. As with all types of treatments, there are limitations. It is important that the patient identifies a treatment method that is comfortable to them, as the ultimate goal is to improve their mental health well-being.

Module Recap

In Module 10, we discussed the methodological artifacts from both clinician and reporting biases that may contribute to the gender differences among prevalence rates among mental health disorders. In keeping some of these artifacts in mind, we also discussed gender differences in rates of the most common psychological disorders- depression, anxiety, PTSD and eating disorders, as well as the biological, cognitive, psychological, and societal factors that contribute to these gender differences. It is important that you are able to identify these different factors as they contribute to differing rates of mental health disorders between men and women. We also discussed suicide and the gender paradox that although men complete more suicides, women are more likely to engage in nonfatal behaviors. We also identified the different methods men and women used when engaging in suicidal behaviors. The module concluded with a brief overview of how gender may impact one's willingness to seek out mental health treatment and how feminist psychotherapy may help women and other minority groups address societal influences.

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5: FINAL TOPICS

5.1: Module 11 – Gender Through an Educational Lens
5.2: Module 12 – Gender Through an Industrial-Organizational Lens

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5.1: Module 11 – Gender Through an Educational Lens

Module 11: Gender Through an Educational Lens

Module Overview

In this module, we will focus on the educational experiences of males and females. We will look at how experiences differ in the preschool and school ages. We will also discover how school performance in various subjects differs between genders. We will also consider the concept of academic motivation, factors that contribute to academic motivation, and gender differences in this motivation.

Module Outline

- 11.1. Preschool
- 11.2. School
- 11.3. School Performance

Module Learning Outcomes

- Learn about preschool-age experiences and how gender impacts these experiences.
- Understand varying abilities and experiences in school-aged children.
- Recognize the factors that differentially impact boys' and girls' performance and motivation at school.

11.1. Preschool

Section Learning Objectives

- Define self-competence and self-esteem and understand how (1) these impact school experiences and (2) differ between boys and girls.
- Gain a detailed knowledge of the role play has in preschooler's development and how play varies between genders.

11.1.1. Self-Competence

A child's ability to self-regulate (e.g., their ability regulate following experiences of stress, excitement, and/or arousal) may lead to better social competence (e.g., relationship skills and abilities) which then leads to higher self-esteem and self-concept (e.g., the ability to cope with correction/failure), and then ultimately leads to higher social school readiness (e.g., higher cooperation with peers, positive views about school, fostered ability to listen and focus; Joy, 2016).



11.1.1.1. Self-Esteem. Preschoolers tend to have very high self-esteem (Harter, 2006). This is likely because preschoolers struggle to truly differentiate the level of difficulty in a task and overestimate their own abilities which actually leads them to trying challenging tasks more often, and exposing themselves to learning a variety of skills. This fosters motivation and learning in preschoolers. Overall, boys and girls tend to have similar self-esteem (Cole et al., 2001; Marsh & Ayotte, 2003; Young & Mroczek, 2003); however, society assumes boys have higher self-esteem, and it may be that girls internalize this assumption that society has. Thus, some studies show that girls have lower self-esteem (Hagbor, 1993).

What impacts self-esteem? Parenting styles and teachers can certainly impact self-esteem in young children. Parents that practice warm, but firm parenting (authoritative parenting), have children with higher self-esteem. Parents that are overly correcting or controlling deny children the ability to develop self-esteem fully, and these children have lower self-esteem ratings (Kernis, 2002; Donellan et al., 2005).

Does how similar a model have anything to do with how we learn and master tasks, and thus, self-esteem and competence? Maybe. The *model-observer similarity hypothesis* posits that when learners perceive themselves to be similar to the model "teacher" then they will show greater self-efficacy. However, there is mixed support of this, and that is largely explained by *what* we are learning. Overall, when a model is the same-sex as us, it does not change how much we learn, but it does impact our behavior. This is because we internalize the behavior as appropriate if a same-sex model does it, and the environment accepts it. Essentially, task appropriateness (male versus female tasks), is learned best by same-sex models. Student perceived same-gender models as more similar to them than opposite-gender models. Same-sex models may also increase perceived confidence, but does not necessarily improve performance, increased confidence, or increased self-efficacy (Hoogerheid, van Wermeskerken, Van Nassau, & Van Gog, 2018).

As children get older, self-competence declines. How fast it declines depends on the subject area. For example, self-competence actually increases for sports, but declines for language arts. Specifically, research indicates that males tend to have more perceived self-competence in sports and math and females have more self-competence in language arts (Jacobs, Lanza, Osgood, Eccles, & Wigfield, 2002).

11.1.2. The Role of Play in the Development of Gender Roles

As you might expect, preschool children engage in play as a primary activity in their preschool setting. This is developmentally appropriate for them and they gain extensive knowledge about their world and environment through play – and understanding of gender is no different. Play provides children and their peers an opportunity to test out different roles and ideas as well as to provide feedback as to what works, is acceptable, and/or preferred. Sex-role socialization theory explains differentiated behaviors among sexes due to society creating specific roles for males and females, partially that historically have aligned with their eventual adult roles (e.g., males for labor/work, females for nurturing/child rearing); thus, as young children, we are socialized into roles. The theory posits that there are two opposing categories of sex – male and female (Martin & Beese, 2017). Thus, play is ether masculine or feminine and either aligns with the male-sex role or female-sex role. So, playing with baby dolls aligns with the female-sex role of nurturing and child rearing; whereas pretending to build with toy tools aligns with the male-sex role of manual

labor and working.

Interestingly, before the age of 2, it is difficult for children to distinguish between boys and girls. However, by age 3, they are better able to do this and certainly begin to evidenced varied behaviors and preferences based on gender. Further, by age 5, children will not only prefer to play with their own gender, they will likely reject or show a bias against the other gender (Martin & Beese, 2017; Hill & Portrie-Bethke, 2017; Hill & Haley, 2017).

Ultimately, if we want to reduce this within a school context, and see more gender-equal environments and culture among peers, teachers will have to reteach what is acceptable. Essentially, they would need to provide models and examples of non-sexist behavior. Moreover, they may need to encourage this by being careful to choose gender neutral language (e.g., firefighter instead of fireman), as well as encourage play that is non-sexist (e.g., encouraging boys to play with dolls and girls to play with trucks), and utilize visual materials that are gender neutral or shows both genders doing a task (e.g., girls in male-typical jobs such as a girl as a doctor, and vice versa such as a male as a teacher). Although these may be recommended, they may also be largely ineffective, according to research (Martin & Beese, 2017).

Another theory about gender-role development in the context of preschool and play is the *Feminist Post-Structural theory*. It posits that children not only model gender-normed behavior, they construct their own gender. This theory suggests that gender is not specific to distinct categories; rather, female is defined in relation to male and vice versa. Thus, masculine and feminine characteristics are actually interdependent and exist within a continuum. This theory suggests that, because of this, there is an emotional investment in gender roles and encouraging nonsexist behavior is actually not appropriate. This is because it is suggested that doing this requires an individual to give up something they perceive as desired and pleasurable. For example, if we encourage a girl to play with trucks instead of toys, but they find pleasure in playing with dolls, we are asking that girl to give up a toy she truly likes and enjoys (Martin & Beese, 2017).

What about bullying or teasing based on gender in these young ages? Well it exists. However, 25% of girls reported feeling teased by boys and this usually consisted of behaviors such as boys pushing them too hard/high on a swing, hitting them, etc. This being the case, it would make sense that some girls may want to play with other girls, rather than boys. As such, encouraging nonsexist play and forced gender-mixed play may not be the best option – at least from a feminist post-structural theory standpoint (Martin & Beese, 2017).

11.2. School

Section Learning Objectives

- Recognize overall math abilities in girls as well as overall academic achievement in boys.
- Understand the various components to school culture that contribute to boys' and girls' experiences at school
- Uncover what is defined as "masculine" and the consequences that occur when males do and do not align with the "cool" masculinity traits that are scripted for them.
- Define gender tracking and how this occurs in the school-setting.

11.2.1. Math Ability in Girls

As you know by now from our discussion in the cognitive chapter, there are minimal differences in actual cognitive capacities between genders. Math abilities are no exception. There are no actual differences in abilities with mathematics between girls and boys. However, girls are often perceived to have lower math abilities by adults (e.g., parents and teachers; Tomasetto, Alparone, & Cadinu, 2011; Beilock, Gunderson, Ramirez, & Levine, 2010), peers, and themselves (Correll, 2001). As we discussed with stereotype threat and self-fulfilling prophecies, this perception may then lend itself to girls actually performing lower in math. So, it is not actually that girls have lower math abilities, rather, social and environmental factors impact girls' math performance, leading to lower math performance.

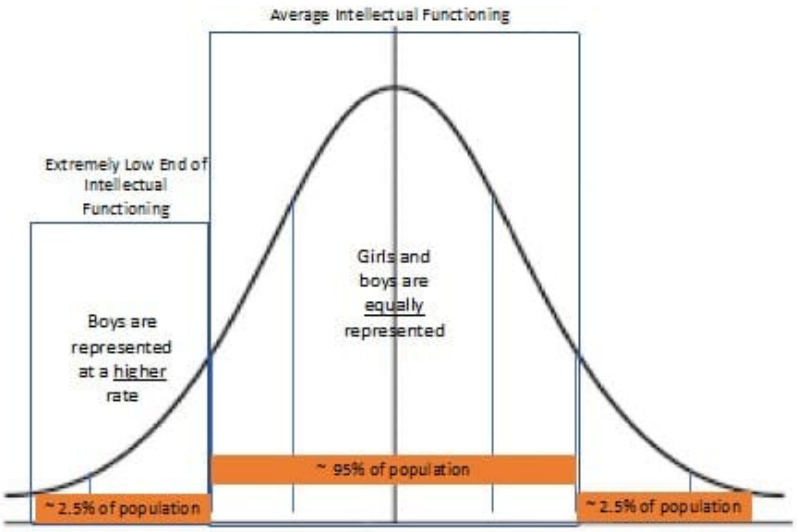
Despite having equivalent math abilities, girls tend to take fewer math and STEM-related courses in grade school years. Because of this, they may be less prepared to pursue STEM-related majors in higher education years, and thus, pursue careers in STEM fields at a lower rate than males. There have been some efforts to combat this, and those efforts may be working, to a degree. Rates of females pursuing STEM-related fields increased. In fact, there appears to be equivalent numbers, largely speaking, between males and females, in seeking STEM-related courses in grade school and even into college. However, this does not necessarily carry out into careers as men are represented to a higher degree in completing STEM-majors and securing STEM-related careers (Martin & Beese, 2017). Potentially contributing to self-fulfilling prophecies.

11.2.2. Boy's Achievement

Although boys appear to get more attention and focus in school from teachers, it is actually a well-documented phenomenon that boys tend to underachieve compared to girls. So although there seems to be a lot of chatter about girls being underestimated and underchallenged with math, boys are falling behind in educational experiences and performance in general. So, really, the conversation may need to shift to boys more (Kafer, 2007)!

For example, girls tend to be more engaged in school, perform higher in academics, are more likely to go to college, and are more likely to complete their college degree, compared to boys. Boys tend to experience more academic struggles and are referred for behavioral problems more than girls. In fact, about 60% of special education services are for boys! Boys are also more susceptible to using substances, getting either suspended or expelled, dropping out, going to jail, and dying by suicide or homicide. You may be asking yourself why – why. Why are boys at risk for such negative outcomes? Well, there may be a few explanations, although we still really don't have a great understanding of this phenomenon (Kafer, 2007).

Figure 11.1. Extreme Scores in Males



So, is it differences in intelligence? Yes and no. Boys and girls equally fall within the "Average" area of intellectual functioning meaning boys and girls are equally represented in the middle of the bell curve (see the blue area of Figure 17.1). However, when we examine the extreme lower end of the curve (see the green area of Figure 17.1), boys may be represented at a higher rate than girls, meaning boys are more likely to have lower cognitive functioning abilities than girls, when looking at only low intellectual abilities (Kafer, 2007).

Another explanation is that schools may not focus enough on boys' literacy and reading skills. Although there is a literacy gap noted in public schooling, this gap is not found in homeschooled children (Kafer, 2007). So why is that? Are we not fostering reading and writing skills enough in boys in the traditional-public school setting? What do we do? Would creating a school that is more focused and intune to boys' needs and abilities increase achievement in boys? If so, is considering school choice and charter schools the best option for increasing male achievement rates?

Neall (2002) recommends that, within school settings, boys' self-esteem can be raised by teachers praising achievements and reminding them of their success, encouraging their desire for competition and high activity by fostering their involvement in competitive sports and allowing them to move more when learning, perhaps considering single-sex classrooms, and using the model-observer similarity, increasing male teachers (Skelton, 2006).



11.2.3. Culture

The culture created at school and in a classroom is incredibly important for the outcomes of youth. So, what about cultures as it relates to gender specifically? Well, much of culture comes from social norms and expectations. For example, girls are expected to be quiet and prosocial. As such, they receive high amounts of praise for these qualities and a strong focus is placed on their appearance. If girls stray from these expectations, they may receive negative evaluations. For example, girls are not expected to be assertive, so when they exert assertiveness, they are often labeled as disruptive (Martin & Beeese, 2017).

What about when peers do not conform to gender norms or identify as non-heterosexual? What is the school culture like for them? In general, despite increasing acceptance and tolerance, there still remains a high level of hostility. These youth often experience sexual harassment and discrimination. These experiences at school, due to the culture that persists, may lead to these youth avoiding school and under-engaging, leading to poorer outcomes academically. Increased emotional distress has also been noted. (Martin & Beeese, 2017).

11.2.4. “Cool” Masculinity

Masculinity, particularly as an adolescent, is highly valued in our society. To be perceived as masculine, boys must avoid looking week, limit their emotional expressions, be competitive, and exert power and control. Anger and aggression are not only acceptable, they are often encouraged when in conflict. We socialize this from a young age, expressing direct and indirect messages to young boys that crying and backing down are signs of weakness. In fact, when boys do not appear masculine and adhere to these expectations, they are often ridiculed by peers. While males may reinforce masculine traits in other males, when a female reinforces a male’s engagement in masculine behavior, it is more powerful and salient (Smith, 2017). If a boy is perceived as too feminine, they are heavily ridiculed. Despite females being somewhat encouraged when they break gender norms and display interest in some masculine areas (e.g., sports), boys do not get any real social encouragement when they deviate from traditional masculine roles and characteristics. In fact, they are often shamed and masculinity is often “policed.”

Interestingly, when we encourage males to restrict their emotions and to “be tough” we may be encouraging aggression toward themselves and toward others (Feder, Levant, & Dean 2007). Think about it, we don’t only tolerate aggression in males, we encourage it. Think about our soldiers, which are male-dominant. We celebrate their bravery and courage and they are often trained to restrict emotions – similarly, we see this in first responders as well. We see aggression in males modeled on television too. Miedzian (2002) defines this focus of aggression in males the *masculine mystique*. Whereas boys with higher SES and more resources may find appropriate ways to channel this masculinity and aggression, boys in lower SES status may struggle to find adaptive ways to channel this, thus, resulting to more negative means and criminal behaviors.

11.2.5. Gender Tracking

Gender tracking is when students are channeled into different areas of focus/paths solely based on their gender. Although this

can happen overtly, it may more commonly happen covertly. How children are gender tracked may vary based on age as well. For example, we being gender tracking children as soon as we know the sex of a baby – picking toys, clothes, names, and décor that are specific to their gender. Fast forward to elementary aged children, and teachers continue to track girls and boys into playing with gender-typical toys. These are more overt channels. However, a covert path is when teachers begin calling on boys more and attending to boys more. This leads to girls raising their hands less frequently. Moreover, boys tend to be identified as requiring special education services more, thus tracking them into an alternative school option more frequently (Jones, 2017).

Tracking in secondary education may be two-fold. First, lower achieving students may be tracked into vocational learning. As such, within that tracking, boys are often tracked into traditionally considered masculine trades (mechanical and masonry tasks), whereas girls are tracked into traditionally feminine trades (e.g., food trades, child care, and cosmetology). The greater concern is that, often, the feminine trades often have a lower incoming potential (Jones, 2017).

So, what about high achieving youth – are they tracked too? In fact, they are. Higher achieving males tend to be tracked into STEM-related classes whereas higher achieving girls tend to be tracked into humanities, social sciences, etc. The only area that seems someone immune to gender tracking is history and biology with both males and females equally represented in such (Jones, 2017).



11.3. School Performance

Section Learning Objectives

- Learn how teachers impact the academic performance of boys and girls.
- Understand the benefits and drawbacks of single-sex schooling
- Uncover the factors that contribute to academic motivation and how gender may differentially impact motivation

11.3.1. Teachers

Teachers play an important role in a child's educational experiences. While teachers often have good intentions and verbalize a desire to help each of their students equally, teachers have biases that they are sometimes unaware of that impact students' educational experiences. This bias occurs when teachers form expectations regarding a student's ability to perform on factors unrelated to the student's prior academic performance. Those factors may include the child's gender, their racial or ethnic identity, or their social/financial status. For example, a teacher that assumes a female student has lower abilities simply because she is female (not because of previous test grades by that student), or that an African American student is going to perform lower in their class because of their race, not because of previous performance. My guess is, if you asked a teacher if they held these beliefs, they would say no. I think most of us would say no. The fact is, sometimes we have beliefs we are not aware of (sometimes these beliefs are so automatic and we are so unaware of them, they are referred to implicit beliefs; (Casad & Bryant, 2017).

Robert Rosenthal, one of the first researchers to examine teacher bias, defined the "Pygmalion effect", which is when teacher's expectancies were shown to actually impact IQ scores (keep in mind, IQ is not a construct we think should be impacted in this way). Moreover, the younger a student was, the more likely their score was to be impacted (Rosenthal & Jacobson, 1968; Casad & Bryant, 2017). Ultimately, if a teacher expects a student to underperform, and treats them in that way, students will not be likely to persevere and try hard in a challenge, and then this will likely result in them actually performing lower on tasks (Casad & Bryant, 2017). What we are likely seeing at play here is the self-fulfilling prophecy. A self-fulfilling prophecy is a phenomenon of when someone expects something to occur, the person believes it, and their behaviors then become congruent to lead to that outcome. For example, a teacher believes a student will do poorly, the student then believes this and stops studying, and then they perform poorly, thus confirming the prediction. Teachers' expectations that then lead to self-fulfilling prophecies in students may actually contribute to achievement gaps (Robisnon-Cimpian et al., 2014). Specifically, how teachers communicate to boys and girls, particularly, if they foster expectations that boys will be better in math and girls better in language, then teachers may contribute to self-fulfilling prophecies that are then reflected in gender gaps in math and language (Robinson-Cimpian, et al., 2014).

11.3.2. Single-Sex Schooling

Single-gender or single-sex schooling is a controversial topic. While some are avid proponents of this option, others strongly discourage this route. To understand the controversy, let's first take a look at each side and the reasons for the varying viewpoints. Then we will discuss what the research actually supports.

11.3.2.1. All those in favor of single-sex schooling. Proponents of the tendency to indicate that boys and girls learn differently; that there are differences in how their brains are developed and in their abilities. They argue single-sex schooling would allow to account for this and tailor education specific to a child's potential learning/cognitive strengths and weakness based on their sex. They also argue that it this type of setting allows for biases in classrooms to be minimized. Remember how we learned that teachers tend to focus more on boys than girls, and that boys' academics are emphasized whereas girls' prosocial behaviors, quietness, and helping behaviors are emphasized? Well proponents of single-sex schooling school argue that the nature of single-sex classes would eliminate these biases, particularly for girls (Halpern et al., 2011).

11.3.2.2. All those against single-sex schooling. Although the individuals that are proponents of single-sex schools site learning and cognitive differences as a logical rationale in support of single-sex schooling, as discussed in the cognitive chapter, there are very little differences, cognitively speaking, between girls and boys. And, when those differences are present, they are very minor. Thus, those against single-sex schooling argue that this rational is founded on pseudoscience and does not have any real basis. Those arguing against single-sex schooling also argue that these settings increase gender division, segregation, and stereotypes due to the clear divide it presents. In fact, research actually supports this argument (Bigler & Liben, 2006; Martin & Halveron, 1981; Hilliard & Liben, 2010). Essentially, when segregation occurs, children formulate assumptions that the segregation occurred because the two groups have differences that are important to highlight; thus, biases, particularly intergroup biases, increase. This structure also limits the availability and opportunity for boys and girls to learn to work together (Halpern et al., 2011).

11.3.2.3. The evidence. Most research actually shows that there is no advantage to single-sex schooling when it comes to overall academic performance. Although you may come across research that seems to support single-sex schooling, flaws in the research have commonly been noted (Leonard, 2006). Specifically, more often than not, findings supporting single-sex schooling tend to disappear when critical confounding factors are controlled for. For example, many students in single-sex schooling options tend to be more academically advanced students to start with. Thus, when you simply compare the single sex school (that contains a higher concentration of advanced performing students) to other mixed-sex schools, it seems like the single-sex schooling is excelling, and the conclusion is often that this is due to the single-sex context. However, when one controls for the more advanced students, there is no statistical difference showing advantages for single-sex schooling (Hayes, Phalke, & Bigler, 2011; Pahlke, Hyde, & Allison, 2014). In the same respect, children that are underperformers will often transfer out of single-sex schooling; thus, continuing to artificially inflate the academic performance scales of single sex schools (Halpern et al., 2011).

The argument that gender stereotypes may be reduced in single-sex schools is not supported. In a Swedish study, it was found that boys were overconfident in math whereas girls were underconfident in math in single-sex schooling; thus, single-sex schooling did not help dispel the stereotype of poor math abilities in girls. Moreover, this was repeated in an El Salvador study which again found the same results (Jakobsson, Levin, Kotasdam, 2013)

Although there does not appear to be a genuine overall advantage to single-sex schooling, there may be smaller or isolated benefits to single sex schooling. For example, there may be some slight advantages for girls in math, regarding single-sex schooling. Still, some research shows differing results. For example, Bell (1989) and Spielhofer (2002) found that children

in single-sex schools were more likely to choose science than children in coeducational settings. Stables (1990) found that children sought out gender-atypical classes more often in single-sex schooling, and this was particularly true for younger students. However, Francis (2003) found conflicting results revealing that girls showed similar preferences and sought out similar experiences equally in single-sex and coeducational settings (Leonard, 2006).

Overall there is very little support for single-sex schooling, from an empirical stance. Moreover, very little is actually known about the long-term impacts of single-sex schooling and outcomes (Leonard, 2006).



11.3.3 Achievement Motivation

Achievement motivation is the "motivation relevant to performance on tasks in which there are criteria to judge success or failure." (Wigfield & Cambria, 2010). The motivation to be successful, particularly in academics, has important outcomes. For example, academically motivated youth tend to perform better at school, have increased prosocial behavior, and higher attendance at a school. So, what leads to academic motivation? Females have more intrinsic motivation (e.g., self-motivating) to achieve high in academics whereas males rely more on external motivation (e.g., praise, external rewards; Vecchione, Alessandri, and Marsicano, 2014). Moreover, an individual's perceived competence in an area, as well as determination, impact the level of motivation one has, academically, which also happens to impact their performance in a positive way (Fortier, Valleranda, & Frederic, 1995). Parents that engage in warm, but firm parenting, also foster higher academic motivation.

Attribution styles also impact achievement motivation. *Learned helplessness* is an attribution style in which failures are attributed to one's ability and success is attributed to external things like luck. This attribution style is one in which a person believes they cannot improve on weaknesses, so, if a task is difficult, they don't feel like they can do anything to overcome it and may give up. *Mastery-oriented attribution style* is when an individual explains successes as a result of their ability, as well as explaining failures as a result of controllable factors, such as their effort. Thus, they approach challenges as something they have control over, persevering and putting forth effort (Heyman & Dweck, 1998). Master-oriented individuals focus on learning goals whereas learned helplessness individuals focus on performance (Heyman and Dweck, 1998). Children with a learned helplessness attribution style do not end up developing the necessary skills such as self-regulation to strive and succeed in high achieving contexts; thus, academic motivation may be lower. If teachers focus more on learning than performance and grades, then they end up fostering more master-oriented students (Anderman et al., 2001). It appears that girls are more likely than boys to attribute failure to ability (Bleeker and Jacobs, 2004).

Boys report more interests and ability in math and science whereas girls report more ability and interests in language and writing. Moreover, gender differences with motivation show up early and increase as children age. This is especially true with language arts. Specifically, as children get older, the gender gap in math and science motivation (with boys having more motivation in this area) begins to decrease whereas as the gender gap in language arts (with girls having more motivation) actually increases (Meece, Bower Glienke, & Burg, 2006).

Module Recap

In this module, we first focused on understanding the unique experiences of preschoolers and how their development of self-competence and self-esteem occurs, factors that impact their development, and the importance of their play in their development. We then moved on to school-aged children and learned about various similarities and differences in their abilities, motivations, and experiences. We also discussed the benefits and drawbacks of single-sex schooling. Finally, we ended our discussion with understanding gender differences in academic motivations.

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5.2: Module 12 – Gender Through an Industrial-Organizational Lens

Module 12: Gender Through an Industrial/Organizational Lens

Module Overview

In this module, we are going to focus on women's experiences in the workplace. We will first look at the ways in which career goals may differ between men and women, and why differences in career goals exist. We are then going to take a look at equality in the workplace. Do women and men get the same experiences and pay? Do women have specific barriers that men do not in the workplace? We will find out. Finally, we will look at how women try to balance work and family roles/obligations.

Module Outline

- 12.1. Occupational Goals
- 12.2. Sex and Gender Equality
- 12.3. Obstacles
- 12.4. Work and Family

Module Learning Outcomes

- Outline the varying goals that men and women may have regarding occupations and careers, and how sex-typing and sex-roles impact those goals.
- Discover how equal or unequal the workplace is for women and men.
- Understand the various obstacles women face in the workplace.
- Gain a foundational understanding of how women balance work and families, the benefits or risk of such, and obstacles they may encounter in doing so.

12.1. Occupational Goals

Section Learning Objectives

- Define sex-typing
- Understand how sex-typing impacts career goals for men and women
- Define self-efficacy and understand how self-efficacy may impact career choices



12.1.1. Sex Typing and Career Choice

Sex-typing essentially is when we hold the belief that men and women are suitable for specific jobs, based on their biological sex, and thus, occupations are segregated into gender-typical categories. For example, jobs such as engineering, mechanics, and emergency response are largely considered masculine jobs and are male-typical whereas jobs such as teaching, service-related jobs, and nursing are largely considered feminine jobs that are female-typical jobs. So, does this happen in society? Do males tend to gravitate toward masculine jobs and women toward feminine jobs? Most of the research says this happens quite frequently!

Parents strongly impact children's' perceptions of occupations and contribute to early sex-typing. In a study by Jacobs, Chhin, and Bleeker (2007), parents' gender-typed expectations correlated with children's expectations and career choices. Moreover, having a gender-typical career was linked to more job satisfaction in adulthood (Jacobs, Chhin, & Bleeker, 2007). Gettys and Cann (1981) also found that children as young as 2 recognize gender-typical jobs and label traditionally male and traditionally female occupations as such. Thus, sex-typing is taught and observed at a very young age.

Gadassi and Gati (2009) studied adults between the ages of 20-30 years old. They found that males tended to prefer more masculine careers whereas women preferred more feminine careers. However, stereotypes largely impacted this. These preferences dissipated some when gender stereotyped expectations about the careers were made less obvious (Gadassi & Gati, 2009). Etaugh and Riley had male and female college students read job applications. The job the applicant was applying to was either feminine or masculine. Participants were told if the applicant was male or female, married or single, and if they had children. In general, participants evaluated women that applied for sex-typical jobs best, especially if they were single. Participants evaluated women and men, especially single men, more negatively when they applied to sex-atypical jobs (Etaugh & Riley, 1983). Moreover, males and females alike tend to rank male-typical jobs with higher prestige (Oswald, 2003).

For careers that are strongly sex-typed (e.g., teacher = feminine, engineer = male), we see both explicit (e.g., verbally acknowledged and recognized) and implicit (e.g., instinctual, unware) stereotyped bias. However, for careers that are not sex-typed quite as strongly, implicit and explicit bias does not always align. For example, White and White (2006) found that, although participants explicitly ranked accounting as less masculine, they implicitly scored accounting as more masculine; thus, their implicit and explicit bias did not align.

In general, men tend to prefer to work in solitude, desire more autonomy, and seek high earnings, whereas women value working with others, having an easy commute, positive coworker/boss experiences, and benefits rather than earnings (Helgeson, 2012). In general, neither male nor female college students deliberately or explicitly make career choices based on future family planning (Cech, 2015).

Interestingly, sex-typing that leads to the segregation of genders in the occupational field leads to variance in pay, because of the way in which male-typical and female-typical occupations are reimbursed (read pay discrimination for more).



"I can change the world."

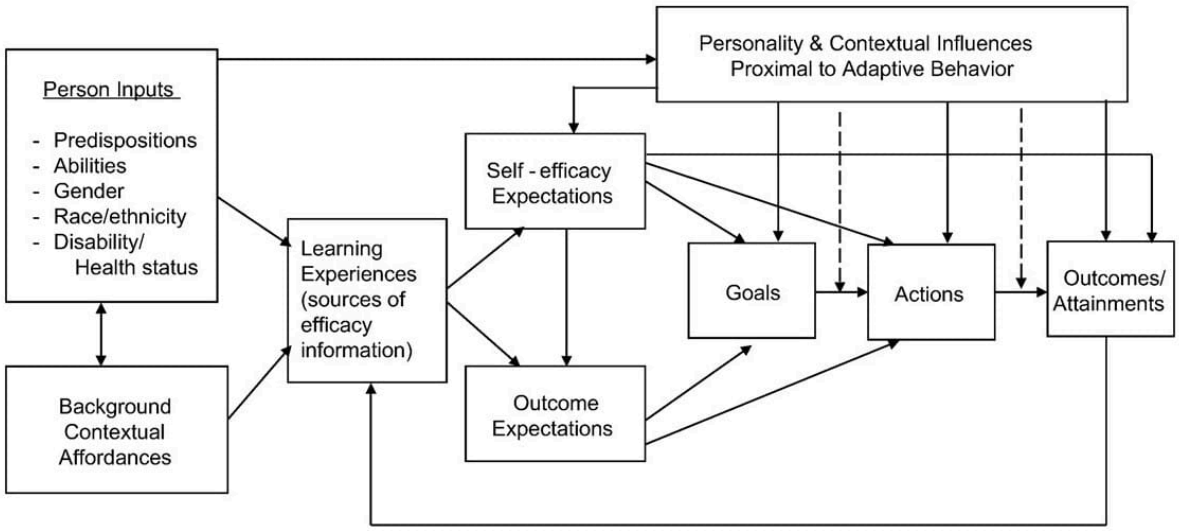
12.1.2. Personal Self-Efficacy

First, what is self-efficacy? Self-efficacy is a person's belief about their ability to enact influence in their lives. Ultimately, this belief is what leads to a person's motivation to take on activities and to persevere in hardship (Bandura, 2010). If a person does not have high self-efficacy, they may not believe they have the ability to bring about change. Thus, in the face of adversity, they may not persevere, and although they may want to attain a goal, they may not be motivated because they do not believe they can actually achieve it.

So what impacts self-efficacy? Parent and teacher support may impact self-efficacy in career decision making which then may impact an individual's optimism about their career (Garcia, et al., 2015) and adaptability (Guan et al., 2016). Women's self-efficacy may be more impacted than male's self-efficacy by having supportive role models. Increased self-efficacy also led to women expressing higher intentions for entrepreneurial careers (BarNir, Watson, & Hutchins, 2011).

A theory that has recently developed, social cognitive model of career self-management (CSM), posits that person dependent factors (e.g., gender, abilities, race) and societal background impacts learning experiences which is where we get some information about efficacy. That then impacts self-efficacy and the expectations we have about outcomes (including career outcomes), which then impacts our goals, actions, and outcomes (Lent, Ireland, Penn, Morris, & Sappingtoon, 2017; see Figure 18.1 for a pictorial representation of the model). Experiences of mastering tasks, vicarious learning, and high positive/low negative emotion impacted self-efficacy which then impacted outcome expectations about careers (Lent, Ireland, Penn, Morris, & Sappingtoon, 2017).

Figure 12.1. Directly Sourced from Lent et al. (2017) Figure 1.



12.2. Sex and Gender Equality

Section Learning Objectives

- Define discrimination
- Recognize how women may face hiring and pay discrimination
- Learn about gender differences in negotiating and how this impacts pay gaps

12.2.1. Hiring Discrimination

Discrimination is when someone is treated differently based on a demographic variable, may that be their sex, gender identity, sexual orientation, physical status/ability/disability, etc. For the purpose of this book, we will focus on discrimination based on gender (sex), orientation, and family status. The rate of women in the workforce has gradually increased over the years, and based of the most recent data in 2016, 46.8% of the workforce is female (U.S. Department of Labor, 2010 & 2016). The number of women wanting to work has also increased.

Affirmative action is an attempt to prevent discrimination. Affirmative action policies are aimed to help ensure that populations that have typically been disadvantaged or overlooked in particular settings do not continue to get discriminated against. Interestingly, affirmative action appears to benefit men more than women in some scenarios. For example, Ng and Wiesner (2007) found that males applying for male-typical jobs (e.g., nursing) were more likely to get the job, even when they were less qualified than a female counterpart whereas a female applying for a male-typical job (e.g., police officer) often needed to show excessive qualification to get the position, and still, they struggled to secure the position (Ng & Wiesner, 2007).

The difficulty in getting hired based on sex is also known as *accessdiscrimination*. Essentially, accessing the opportunity to work in a particular field is difficult. We will talk about access discrimination as it relates to the glass ceiling, but it can be seen in other realms as well. For example, less women are typically represented in judicial roles (Helgeson, 2012).

Study after study shows, males are often preferred over females (Zebrowitz, Tenenbaum, & Goldstein, 1991; Olian, Schwab, & Haberfeld, 1988). And, it is not just males preferring to hire females. Research shows that males and females are both likely to prefer a male candidate over a female candidate (Steinpreis, Anders, & Ritzke, 1999).



12.2.2. Pay Discrimination

The counterpart to access discrimination is *treatment discrimination*. Treatment discrimination is when an individual is paid less or given less opportunity at work (e.g., promotion; Helgeson, 2012). Specifically, as it relates to gender, when a female earns less than a man, despite having the same position/title, or when a woman is less likely to be promoted than a male coworker, despite having the same qualifications and reliability/work performance at work. The pay gap, although improved to some degree, still exists and is sizable. According to the most recent data reports (at the time this chapter was first written), women made only 81.4% of what men make (U.S. Department of Labor, 2019). Although it has increased since the mid-2000's estimates of 78%, this still breaks down to sizable deficits. The most recent 2019 numbers indicate that women's weekly salaries, on average, are $812 whereas men's weekly salaries are $1,005 (U.S. Department of Labor, 2019).

Although the gap has been decreasing, data shows that women are offered starting salaries, on average, that are $11,000 less than their male counterparts. The gap is even worse if women are older. Moreover, this gap holds true even in female-typical and female-dominated fields (Ancis, 2017).

Why does this occur? Well, there are a few theories. One theory is the *supply-side theory*. This theory posits that people have different skills and qualities to offer and differences in those abilities lead to differences in pay. Although this seems logical, it does not explain the pay gap entirely. Even when men and women have the same skill sets and qualifications, women make far less than men. Thus, there must be something else that explains a portion of the picture. That is where *demands-side theory* comes in. This theory posits that the environment or workplace contributes to the pay gap, meaning that the workplace desires females less, and thus pays them lower. Ultimately, both theories likely explain portions of the pay gap; however, because the gap is still present when male and females are equally qualified, and despite women becoming more qualified than men in many fields, yet still being paid less, the demand-side theory likely explains a larger portion of the pay gap (Helgeson, 2012).

Another reason for the pay gap may be sex typing/sex segregation of occupations. The occupations that women tend to work in are traditionally paid lower than the occupations men tend to work in. Thus, because women work in jobs that have lower reimbursements more often than men, there is a pay gap. Moreover, even when roles are equal across jobs, we tend to think that jobs women hold will pay less. This is known as the salary estimation effect (Dunn, 1996). Thus, we expect women will make less. Men tend to hold this salary estimation belief more strongly than females, and this may be largely explained by implicit biases with gender.

Finally, the "mommy tax" or maternal wall, may also contribute to pay discrepancies. Mothers are viewed as less desirable, and because of this, they receive less opportunity. Mothers also tend to work fewer hours and have to take off more time, leading to less experience. When looking at data from Dey and Hill (2007), women with children (63% pay gap) experience a much greater pay gap compared to women without children (77% pay gap). Women without children were more likely to be called for an interview than women with children in an experiment conducted by Correll, Benard, and Paik (2007). However, fathers were actually more likely to be called for an interview over nonfathers, when looking at male applicant pools.

12.2.3. Negotiations

Males are more likely to negotiate a starting salary at a higher rate than females. However, even when both males and females negotiate, men often have better results. Men tend to ask for more money in an initial request than women do. Men also have better outcomes after negotiating than females (Gerhart & Rynes, 1991). For example, men asking for more at the beginning of negotiations may lead to their negotiating of a higher salary than females. This starting salary difference between men and women then continues to grow. For example, both a male and a female negotiate a starting salary, but the male negotiates one that is $5,000 higher. Each year, they both get a 3.5% bonus. Think about that, after year one, the male makes $56,925 ($1925 raise) and the female makes $51,750 ($1750 raise). The male getting $175 more in a raise doesn't seem like much. But, after 5 years, the male makes $65,322 ($10,322 in raises), and the female makes $59,384 ($9,384). Now, the male is getting $938 more in raises than the female. That means that initial $5,000 pay gap is now nearly a $6,000 pay gap just 5 years later. Can you see what this looks like as the years go on? This is the phenomenon of *accumulation of disadvantage* – the gradual increasing of a pay gap based on an initial salary gap (Babcock & Laschever, 2003). Want to play with more numbers to see how much this gap can grow? This website is a great, easy calculator to do just that: https://www.easysurf.cc/fsalary.htm(opens in new window) [www.easysurf.cc] .

So why does this happen? Why do women and men not negotiate at the same frequency or get the same results in negotiation? Well, it may be a combination of factors. First, think about the gender role and socialization of women. Women's gender roles script them to be cooperative, affiliative, and communal whereas men are scripted to be direct and assertive. What does it take to be successful in negotiation? Well, you certainly need to be assertive. Research indicates that women tend to be more cooperative in negotiations than men (Walters, Stuhlmacher, & Meyer, 1998). They also may be less likely than men to know their worth; thus, advocating for less reimbursement. Women also have lower feelings of entitlement whereas men are more inclined to negotiate a higher salary because they feel they deserve it, and women tend to fear conflict related to negotiations more than men. In a laboratory study, Bowels and Babcock (2007) found that, in general, participants penalized women more than men for initiating negotiation of pay. Interestingly, males penalized females more for initiating negotiates, and females penalized everyone (male and female), suggesting that males do not like when women negotiate, and women do not like when people negotiate at all. They also found that women are less likely than men to initiate a negotiation if the evaluator in the study was male, but if the evaluator was female, men and women were equally likely to negotiate (Bowels & Babcock, 2007).

Are there situations when women are better at negotiating? Yes! Women will show more assertion if advocating for another person, rather than when advocating for themselves (Babcock & Leschever, 2003; Babcock, Laschever, Gelfand, & Small, 2003). Women may also negotiate better if they know they have experience in negotiation, were given more information about the range in which bargaining could occur, and again, were negotiating for someone else. Women were also better at negotiating when the occupation they were negotiating for was most congruent with their ender role (Mazei, et al., 2015).

12.3. Obstacles

Section Learning Objectives

- Define the glass ceiling and understand, not only what this is, but what contributes to the continued presence of the glass ceiling.
- Understand what the glass cliff is and the impact it has on women.
- Recognize what sexual harassment is, the prevalence of sexual harassment, and the impacts it has on work performance and goals.



12.3.1. Glass Ceiling

The term glass ceiling was first used to define an invisible barrier that prevents women from promoting to the highest positions in a company/organization. The barrier exists due to stereotyped beliefs that drive discriminating behaviors. Despite women being equally likely to be employed compared to men, women being more likely to hold entry-level positions with college degrees, and women holding the majority of higher education degrees (undergraduate and masters), only 14% of top executives at companies are females with even fewer are top earners or CEOs at fortune 500 companies. However, improvement has happened since the 1980's and continued to improve until about 2009, which is when improvement for women, regarding upward movement in the workplace, stalled (Kernodle, 2017). The glass ceiling contributes to women having lower-level positions, getting less opportunity for promoting, and getting paid less.

For women, their level of commitment may be questions. For example, companies may wonder if a woman will want to have kids, and if she does, she will have to then divide her time and attention between work and her family. Interestingly, this assumption is not made for men in the same way it is for women. This mindset reveals that maternity is actually viewed as an expense by companies (Kernodle, 2017). Women tend to have to work harder than their male counterparts to prove themselves. And, when they do have families, they may struggle to make afternoon/after-work commitments and events, which can limit their networking opportunities, which may then impact their upward mobility. Moreover, because upper-management tends to be dominated by males, women in these upper positions may feel like it is difficult to "fit in" and may be excluded from informal after work events that also open up opportunity for networking and engaging. They also may not be as able to work overtime, thus, limiting work performance in some fields (Soleymanpour Omran, Alizadeh, & Esmaeeli, 2015).

Women are viewed as affiliative and men as assertive, and this may impact the glass ceiling. Upper-level positions are typically leadership positions. Leadership aligns with masculine-typical characteristics such as assertiveness; and thus, traditional leadership qualities are often the opposite of female stereotype of warm, passive, affiliative, and nurturing. Women in leadership roles are often held to higher standard than men as well. If women don't adopt some masculine traits, they may not be respected in their role; however, when they do adopt some of these traits, they are actually perceived as less liked (Ancis, 2017).



12 .3.2 Glass Cliff Phenomenon

Alexander Haslam and Michelle Ryan (2005) were one of the first to coin the term *glass cliff phenomenon*. (2005). The *glass cliff phenomenon* is the overrepresentation of women being promoted to leadership positions in companies that are underperforming or are severely unstable. Whereas men are more likely to be promoted to leadership positions in high performing, stable companies, women are more likely to be promoted in unstable and underperforming companies. Yup, you read it right – after women push through the glass ceiling and get a high promotion, they often find themselves at risk of losing everything and teetering on the glass cliff of an unstable company. So why does this happen? Well, some research indicates that women may be put in these roles during crisis because they are good at managing people as well as easier to place blame on for the company failures (Ryan, Haslam, & Postmes, 2007). Placing a female in the role of leadership during crisis may also signal to others that there is an organizational change occurring (Brukmuller & Branscombe, 2011; Oelbaum, 2016). Females tend to have attributes of warmth and caring, qualities desirable when a company is unstable; whereas men are known to be more assertive and direct, qualities that may be more desirable when a company is doing well. Although research appears pretty consistent in its findings, while women readily acknowledge the phenomenon, men may be more reluctant to acknowledge the phenomenon (Ryan, Haslam, Postmes, 2007).

12.3.3. Sexual Harassment

Sexual harassment can be difficult to find, largely due to the fact that although some behavior may be very obvious and overt, other behaviors that make up sexual harassment may seem less obvious, more covert, and may be dependent on an individual. Ultimately, if a “reasonable” person would say that labels behavior as hostile, then it is likely considered sexual harassment (Weiner & Gutek, 1999). Moreover, if the behavior is not a choice (it is forced) and it makes someone uncomfortable, it is hostile (Helgeson, 2012).

There are two types of sexual harassment – a hostile environment, and quid pro quo. A *hostile environment* is sexual harassment that occurs when a person experiences unwanted sexual communication or behavior from a coworker, boss, or someone else. For example, every time Anna comes into work, her male coworker overly comments on her appearance, calls her ‘babe,’ or comments on her physique. *Quid pro quo sexual harassment* literally means this for that. Thus quid pro quo sexual harassment is when sexual advancements are made and tolerating this allows the individual to advance (or keeps them from punishment). More specifically, this harassment is when someone, often with higher authority than the victim, threatens or asks for sexual acts in exchange for the victim getting some work-related benefit (such as a promotion, raise) or threatens them with punishment (such as a demotion, fired) if they do not engage in the act (Helgeson, 2012). For example, Sally’s boss asks her to perform a sexual act and promises her to get Friday’s off as long as she does this act.

Sexual harassment can occur to anyone; however, 84% of sexual harassment claims are by women, indicating that women experience sexual harassment more often than men. Keep in mind that not all sexual harassment is reported. About 50% of women will experience sexual harassment in the workplace. On college campuses, 2/3 of students experience sexual harassment

(Helgeson, 2012).

The experience of sexual harassment may lead to negative outcomes for an individual's psychological wellbeing (e.g., increased anxiety and depression), health (e.g., increased somatic complaints such as headaches, and job satisfaction and performance (Helgeson, 2012; Willness, Steel, & Lee, 2007). If an individual has been harassed at work, they likely are unhappy at their job and may perform worse – they may also be more likely to quit or be fired. The more severe the harassment, or the more repetitive/frequent it is, the worse an individual's outcomes may be (Collinsworth, Fitzgerald, & Drasgow, 2009); However, even in low frequencies, sexual harassment can have very negative impacts on women (Schneider, Swan, Fitzgerald, 1997).

12.4. Work and Family

Section Learning Objectives

- Define and understand stereotype content model and how this relates to stereotypes of women, especially pregnant women.
- Recognize multiple role theories and the risk and benefits of holding multiple roles
- Recognize the unique challenges women may face when holding multiple roles.

12.4.1. Stereotype Content Model

The perception of warmth and competence leads to perceived competition and status, according to the stereotype content model. The various combination of these characteristics (i.e., warmth and competence) leads to differing outcomes of perceptions. Essentially, stereotypes are made from a systematic assessment of warmth and competence in an individual. Warmth refers to how friendly and sincere someone may be, whereas competence refers to how capable, competent, and skillful someone is. Someone may be perceived as high in one area and low in another, high in both, or low in both. These combinations lead to stereotypes that are associated with emotions and specific behaviors. For example, an individual with high warmth and low competence (perhaps elderly or women that do not work) may be pitied. Below are the four combinations that occur listed (Fiske, et al., 2002).

1. **Admired Group:** High in warmth and high in competence. Middle class individuals may be classified here.
2. **Hated/Contemptuous Group:** Low in warmth and low in competence. Homeless or low-income individuals are often stereotyped here.
3. **Envied Group:** Low in warmth and high in competence. The female CEO may be classified here.
4. **Pitied Group:** High in warmth, but low in competence. This group may include elderly people and disabled individuals, as well as pregnant women.

These stereotypes then lead to specific emotions and behaviors. Group 1 brings out active and passive facilitation, whereas Group 2 brings out Passive and active harm. Group 3 brings about active attacking behavior and passive neglect. Group 3 brings about active attacking behavior and passive neglect. Group 4 tends to lead to both active helping behavior but also passive neglect (Cuddy, Fiske, & Glick, 2008).



12.4.2. Pregnancy Discrimination

An amendment to Title VII of the Civil Rights Act (1964) protects women from discrimination related to pregnancy or child birth, defining such as sexual discrimination, and thus, unlawful. This amendment is known as the Pregnancy Discrimination Act (PDA; US Equal Employment Opportunity Commission, 2018). The PDA was established in 1978. The act essentially indicates that an employer cannot fire or refuse to hire a woman because she is pregnant. It also states that an employer cannot discriminate in other ways such as passing a woman up for a promotion, etc., simply because a woman is pregnant. An employer must allow all of the same rights to medical clearances and leave as they would to someone else with an inability to work due to medical concerns. Moreover, although not required to be paid, if a woman has worked for an employer for at least 12 months prior to birth, she may likely be eligible for 12 weeks of leave under the Family and Medical Leave Act (FMLA) of 1993 (US Equal Employment Opportunity Commission, 2018).

Despite this, pregnant women are often pitied and seen as less capable. And despite laws, discrimination of pregnant women is still very common. For example, in 2013, a New York City police officer was set to sit for the Sergeant exam, but she went into labor the day of her exam. Although policies are in place to allow for rescheduled exams due to emergencies, she was denied a retest date**.** In fact, in manual labor or blue-collar work, women are often pressured to take disability earlier in their pregnancy because employers feel it is too complicated to find appropriate accommodations for them (Chrisler, 2017). Again, this is supposed to be protected under the PDA.

Moreover, because pregnant women are often implicitly placed in the “pitied” group, based on the stereotype content model, pregnant women may be liked but also viewed as delicate and receive over assistance. She may even be patronized. Men tend to worry more than women do about the potential for pregnant women to be irrational or overly emotional (Chrisler, 2017).



12.4.3. Balancing Work and Family

Nearly 70% of women that work also have children and a partner (Bureau of Labor Statistics, 2010). So, how does this work? Is it helpful and beneficial for women and families? Well, it depends on what theory you look at. The *role scarcity hypothesis* posits that multiple roles actually leads to negative health outcomes because an individual is trying to spread their resources across too many domains leading to strain. This strain is referred to as *role strain* and can be due to either overload (role overload) or conflict (role conflict). *Role overload* is when time prevents or makes it hard to fulfill more than one role; essentially, time is a limited resource, and you start having to choose where to devote time, because you don't have enough to devote equal time to all of your roles (Helgeson, 2012). Working full time and going to school fulltime may be an example of nonfamily-related role overload. A family-related example may be when you cannot work overtime at work and come home finish all of the laundry. *Role conflict* is when one role prevents or conflicts directly with the other; essentially, you have two obligations at once. An example of this would be an after-hours work event and your child's baseball game being at the same time. These two things conflict with each other, and you cannot physically be at both.

Role expansion hypothesis, also referred to as role enhancement hypothesis, argues that individuals actually benefit from having more than one role. In fact, one role may actually support and empower another role. The theory posits that there are more gains to multiple roles than there are drawbacks (Helgeson, 2012). An example of this may be that, while at your child's baseball game, you network with a company that can alleviate a burden in your current company's end-of-the-year budget. Or, when your significant other offers a suggestion for meeting at work that ends up proving helpful. Or perhaps your role as a physicians' assistant allows you to understand the level of care your child needs when running 103 fever. Most of the research evidence actually shows that there are benefits to multiple roles (Barnett, 2004).

Module Recap

In this module, we are started our discussion by understanding how men and women's career goals differ and why differences in career goals exist. We then discussed the specific hiring and pay discrimination and inequalities women often face in the workplace. We also took a look at negotiation strategies and skills, and uncovered the tendency of women to negotiate less often, and for lower amounts, and the factors that contribute to this. We also took a detailed look at many barriers women face in attempting to advance in their careers, with a specific focus on the glass ceiling and glass cliff. We then focused our conversation on sexual harassment of women. Finally, we ended our conversation about how women attempt to balance work and family life, and particularly challenges, such as pregnancy discrimination, they may face.

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