The Psychology of Gender

Discovering Psychology Series

The Psychology of Gender

3rd edition

Kristy McRaney, Alexis Bridley, and Lee William Daffin Jr.

Washington State University

Version 3.0

August 2023

Contact Information about this OER:

1. Dr. Lee Daffin, Associate Professor of Psychology – ldaffin@wsu.edu

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PDF of Book – The Psychology of Gender 3rd edition

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Record of Changes

Edition	As of Date	Changes Made
1.0	August 2019	Initial writing; feedback pending
2.0	June 2021	Copyediting changes; Added a section on Vaping in Module 8; added Tokens of Appreciation
3.0	August 2023	Copyediting changes; rewrites; additional information added throughout the book

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Tokens of Appreciation

August 2023

We want to offer a special thank you to Ms. Sarah Weston, undergraduate within the online Bachelor of Science degree in Psychology program, for her edits of the 1st edition during the spring 2020. Her changes, and our own, are integrated into the 2nd edition of the book and are a dramatic improvement over the 1st edition. Thank you, Sarah.

We will also like to thank Ms. Robin Valkren, also an undergraduate within the online Bachelor of Science degree in Psychology program, for her edits of the 2nd edition of the book during the spring and summer 2023. Her changes have been integrated into some of our own. Thank you, Robin.

And now to our reader. We hope you enjoy the book and please, if you see any issues whether typographical, factual, or just want to suggest some type of addition to the material or another way to describe a concept, general formatting suggestion, etc. please let us know. The beauty of Open Education Resources (OER) is that we can literally make a minor change immediately and without the need for expensive printings of a new edition. And it’s available for everyone right away. If you have suggestions, please email them to Lee Daffin using the email on the title page.

Enjoy the 3rd edition of The Psychology of Gender.

Lee Daffin (on behalf of Kristy McRaney and Alexis Bridley)

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Interested in learning more about the field of psychology? Please visit any of the books in the Discovering Psychology Series of texts.

- Principles of Social Psychology, 2nd edition
- Fundamentals of Psychological Disorders (formerly Abnormal Psychology), 3rd edition (5-TR)
- Principles of Behavior Analysis and Modification, 4th edition
- Motivation, 2nd edition
- Behavioral Disorders of Childhood, 3rd edition
- Drugs and Behavior, 2nd edition
- Principles of Learning and Behavior, 2nd edition

I

Part I. Setting the Stage

Part I. Setting the Stage

Module 1: Foundations of A Psychology of Gender

3rd edition as of August 2023

Module Overview

In our first module, gender is differentiated from concepts of sex and sexual orientation, and health is differentiated from wellness, laying the foundation for the subsequent modules. The dimensions of gender and the importance of gender congruence are outlined, and terms related to gender are defined. Finally, movements specific to women (i.e., feminism) and men are discussed, as well as some of the professional societies and journals committed to studying gender issues.

Module Outline

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 one will certainly be provided. However, 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. To begin, we need to understand what psychology is.

Psychology is the scientific study of behavior and mental processes. While this may be surprising to some, psychology utilizes the same scientific process and methods practiced by other scientific 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, psychology is the study of behavior and mental processes. Psychology seeks not only to understand the reasons people engage in the behavior they do, but also how. What is the mechanism by which our movements are controlled when we extend a hand to reach for a cup of tea and lift it? What affects the words we choose while madly in love? How do we distinguish between benign or threatening events when a loud sound is heard? What makes an individual view another group as less favorable than their own? 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 related to the health and wellness of individuals. 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 only part of the 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://www.samhsa.gov/wellness-initiative/eight-dimensions-wellness

1.1.3. What is a Psychology of Gender?

Before we can define gender, we must understand the meaning of sex. Though sex and gender are sometimes used interchangeably in everyday language, they have distinct meanings in the scientific contexts of collecting data and conducting research. **Sex** refers to the biological, anatomical aspects of an individual. This includes the individual's hormones, chromosomes, body parts, such as the sexual organs, and how they all interact. When we use the term sex, we are describing the assignment of an individual as male or female at birth, based on these aspects.

In contrast, **gender** is socially constructed and enforced, presumed after a sex is assigned, and leads to labels such as masculinity or femininity and their related behaviors. Gender constructions change over time and differ across cultures. For instance, in the past, the accepted norm was to give pink to boys and blue to girls (Cohen, 2013). Because there is such variety and overlap in evolving gender contructions, people might declare themselves to be a man or woman, as having no gender, or falling on a continuum. 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."

Gender identity is our internal perception and expression of who we are. This 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 an understanding of our gender 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 presentation, we communicate our gender through our clothes, hairstyles, and behavior called **gender expression**. In terms of the way culture affects gender concepts, children are socialized into gender roles though a process beginning before they are born and through toys, colors, and clothes. This socialization can come from parents, grandparents, siblings, teachers, 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 acceptance for more complex expressions of gender is increasing (Parker et al., 2022).

1.1.4. Gender Congruence

When we feel a sense of harmony in our gender, we are said to have **gender congruence**. In gender congruence, the gender of the individual is named such that it matches the internal sense of who they are. This congruence is expressed through their clothing and activities, and being seen consistently by others as they see themselves. 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 individual, 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

Gender must also be distinguished from **sexual orientation,** which refers to who we are physically, emotionally, and/or romantically attracted to. Hence, sexual orientation is interpersonal while gender is personal. We would be mistaken to assume that a boy who plays princess is gay, or that a girl who has short hair is lesbian. The root of such errors comes from confusing gender with sexual orientation. The way someone dresses or acts concerns gender expression, and it is not possible to determine their sexual orientation based on 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/ website.

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 encounter these two concepts throughout the book.

Source: http://www.euro.who.int/en/health-topics/health-determinants/gender/gender-definitions

Two other terms are worth mentioning. According to https://www.genderspectrum.org, **gender expansive** is, "An umbrella term used for individuals who broaden their own culture's commonly held definitions of gender, including expectations for its expression, identities, roles, and/or other perceived gender norms." Additionally, **gender literacy is, "**the ability to participate knowledgeably in discussions of gender and gender-related topics." It involves having a stance of openness to the complexity of gender and the idea that each person determines for themselves their own identity.

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
- Psychology Today on sex differences and whether they are real –

https://www.psychologytoday.com/us/articles/201711/the-truth-about-sex-differences

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

Feminism is a belief which advocates that men and women should have equal rights and opportunities socially, economically, and politically. According to Ropers-Huilman (2002) feminist theory is grounded in three main principles. One of which is that women have 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 to 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 for women to vote, as well as abolitionism. Key figures included Elizabeth Cady Stanton who convened the Seneca Falls Convention in July 1848, saying "all men and women are created equal." There, it was proposed in the "Declaration of Sentiments" that women be given the right to vote. During this time, Susan B. Anthony, who was arrested for attempting to vote, started the National Woman Suffrage Association (NWSA) with Stanton, Lucretia Mott, and Matilda Joslyn Gage. Because of the work of feminists in the first wave, the 19th Amendment to the Constitution, which guaranteed the right to vote for women, was passed and ratified.

The second wave of feminism spanned the 1960s to the 1990s and unfolded during the antiwar and civil rights movements, including women of color as well as women from developing nations. Books by feminists such as The Feminine Mystique, by Betty Friedan, The Second Sex, by Simone de Beauvoir, and Sexual Politics, by Kate Millet fueled a revolution of sexuality and freedom from a life confined within the home, centered around a husband and children. Friedan also started the National Organization for Women (NOW) to fight for equality and raise awareness, with the concept of choice for women being the priority of these efforts. 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, protected in the 14th amendment. Also during this wave, Title VII of the Civil Rights Act of 1964 was passed and the National Organization for the Women was started.

In the 1990s and beyond, feminists of the third wave, having inherited professional and economic power gained by those in the second, have sought to redefine divisions of labor in their households,

workplaces, and further economic, racial, and social justice. During this wave, focus shifted from fighting for equality of individuals to celebrating differences, emphasizing sexual exploration and empowerment within diversity of class, race, ethnicity, and gender.

Feminism takes several forms. First, *liberal feminism* was rooted in the first wave and seeks to level the playing field for women to gain the same opportunities for pursuits as men and dispel the myth that women are not as capable or intelligent. Liberal feminism states that the cause of the oppression of women is rooted in the legal system. *Radical feminism,* however, states that these problems are rooted in patriarchal gender relations. Radical feminists maintain that the liberal counterpart is not sufficient to address centuries of patriarchal oppression and domination of women on the individual, institutional, and systemic levels. This form of feminism seeks to place higher societal value on feminine qualities, which they believe would lessen gender oppression.

M*ulticultural feminism* suggests that women in a country such as the United States have different interconnected identities, and *eco feminism* links the destruction of the planet with the exploitation of women worldwide by the patriarchy, investigating racism, socioeconomic privilege, and speciesism. Finally, *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

There are several forms of men's movements (Fox, 2004). *Pro-feminist* men's movements emerged in the 1970's alongside second wave feminism, during which men questioned the traditional views of masculinity and campaigned in partnership with women for rights and opportunities. Pro-feminist men's movements "exist in many countries and many feminist men's groups focus on involving men in anti-violence work" (Jordan, 2019). A prominent pro-feminist men's organization in the United States is the National Organization for Men Against Sexism (NOMAS). Their Statement of Principles says they advovate "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. 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 encourage 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/.

Other forms of men's movements include the *mythopoetic men's movement,* a New Age movement which emerged in the 1980s. This movement is based on spirituality and psychoanalysis derived from Carl Jung, as well as a book by Robert Bly called Iron John: A Book About Men, in which Bly states that society and the feminist movement depleted male energy. Mythopoets believe society "trapped men into straightjackets of rationality, thus blunting the powerful emotional communion and collective spiritual transcendence that they believe men in tribal societies typically enjoyed" (Messner, 1997). Proponents of this movement use self-help approaches to attain "deep masculinity." Mythopoetic men's groups include the ManKind Project and Promise Keepers. The ManKind Project has a flagship, three-phase training program called the New Warrior Training Adventure which they describe as a modern male

initiation and self-examination, as well as a "hero's journey" of classical literature and myth (ManKind Project Chicago, 2022). For more on the ManKind Project, please visit: https://mankindproject.org/.

The Promise Keepers, a Christian men's group, states that masculinity is in crisis and the soul of men is at stake due to society rejecting 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/.

Some men's movements are geared toward the rights of men, focusing on legislative, political, and cultural change. One such group is the National Coalition for Men (NCFM) which states, "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/. Additionally, the website, www.avoiceformen.com 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, and equally important is disseminating those findings. This is accomplished through 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

- 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
  - 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
  - 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://www.apadivisions.org/division-35/publications/journal/index
  - 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: "J*ournal 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 might state that they are synonyms for one another and 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 humans, 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. 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.

3rd edition

Module 2: Studying Gender Using the Scientific Method

3rd edition as of August 2023

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 by 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 and 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

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, psychology was defined as the scientific study of behavior and mental processes. More about behavior and mental processes will be explained, but before proceeding, it will be useful to elaborate on what makes psychology scientific. In fact, it is safe to say that most outside the field of psychology, or a sister science, might be surprised to learn that psychology utilizes the scientific method.

The **scientific method** is a *systematic* method for gathering knowledge about the world around us. Systematic means that there is a set way to use it. There is some variety in the number of steps used in the scientific method, depending on the souce, but for the purposes of this book, the following breakdown 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: a) independent of emotion and anecdote, b) based on hard evidence, and c) required to be a scientist. For instance, one might wonder if people are more likely to stumble over words while being interviewed for a new job.
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**. This is when a search of the literature is conducted through a university library or search engine, such as Google Scholar, to see what questions have been investigated and what answers have been found. This helps us identify **gaps,** or missing information, in the collective scientific knowledge. For instance, in relation to word fluency and job interviews, we would execute a search using relevant words to our questions as our parameters. Google Scholar and similar search engines would identify those in the key words authors list in their *abstracts* of their research. The abstract is a short description of what the article is about, similar to the summary of a novel on the back cover. These descriptions are useful for choosing which, of sometimes many, articles to read. As you read articles, you can learn which questions still have yet to be asked and answered to give your future research project specificity and direction.
2	Form a prediction.	The coherent interpretation of a phenomenon is a **theory.** A **hypothesis** is a specific, testable prediction about that phenomenon which will occur if the theory is correct**.** Zajonc's drive-theory states that performing a task while being watched creates a state of physiological arousal, increasing the likeliest, or most dominant, response. According to this theory, well-practiced tasks increase correct responses, and unpracticed tasks increase incorrect responses while being watched. We could then hypothesize, or predict, that people who did not practice for their job interview will stumble over their words during the interview more than they normally do. In this way, theories and hypotheses have if-then relationships.
3	Test the hypothesis.	If the hypothesis is not testable, then we cannot show whether or not our prediction is accurate. Our plan of action for testing the hypothesis is called the **research design**. In the planning stage, we will select the appropriate research method to test our hypothesis and answer our question. We might choose to use the method of observation to record speech patterns during job interviews. Alternatively, we might use a survey method where participants report on their job interview experiences. We could also design an experiment to test the effects of practice on job interviews.
4	Interpret the results.	With our research study done, we now examine the data to see whether or not it supports our hypothesis. D**escriptive statistics** provide a means of summarizing or describing data and presenting the data in a usable form, using mean or average, median, and mode, as well as standard deviation and variance. **Inferential statistics** allow us to make inferences about populations from our sample data by determining the **statistical significance** of the results. Significance is an indication of how confident we are that our results are not simply due to chance. Typically, psychologists prefer that there is no greater than a 5% probability that results are 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. In our effort to stop a child from engaging in self-injurious behavior that could cause substantial harm or even death, it could be tempting to overstate the success of our treatment method. In the case of our job interview and speech fluency study, our descriptive statistics might have revealed that people in their 20's stumbled more over words than people in their 30's during their interviews. Even though the results of our sample might be statistically significant, they might not be reflective of the overall population. Additionally, it is important not to imply causation when only a correlation has been demonstrated.
6	Communicate our findings to the larger scientific community.	Once we have decided whether our hypothesis is supported 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 or produce different results. The dissemination of scientific research is accomplished through scientific journals, conferences, or newsletters released by many of the organizations mentioned in Section 1.3.

Science has at its root three *cardinal features* that we will encounter throughout this book. They are:

1. *Observation* – Observational research is a type of non-experimental research method in which the goal is to describe the variables. In **naturalistic observation**, participants are observed in a natural setting. In **structured observation**, participants are observed in a more structured environment, such as a lab.
2. *Experimentation* – To determine whether there is a *causal*, or cause-and-effect, relationship between two variables, we must be able to isolate variables. In a true experiment, the independent variable is systematically manipulated, and extraneous variables are *controlled*, or decreased in variability, as much as possible.
3. *Measurement* –Whether researchers are using a non-experimental, observational design, or an experimental design, it is important for researchers to ensure the scales that are used are *valid* and *reliable*. Reliability refers to consistency, in which the same results are achieved at different times and between different researchers. Validity refers to whether or not the study measured the variable it was intended to measure. Validity and reliability will be further discussed in Section 2.3. These concepts help us to know that the conclusions we infer from our data are drawn from trustworthy sources and techniques.

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 of the scientific method involves the scientist testing their 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: **quantitative**, which is focused on numbers, and **qualitative,** which is focused on words. Psychology primarily focuses on quantitative research, though qualitative research is just as useful in different ways. Qualitative and quantitative research are complimentary approaches, and often fill in important gaps for one another.

2.2.1. Observational Research

In **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 the behavior of those being observed may be influenced. In that case, the behavior of the observed could become *artificial*.

Laboratory observation is a type of structured observation which involves observing people or animals in a laboratory setting. A researcher who wants to know more about parent-child interactions might bring a parent and child into the lab to engage in preplanned tasks, such as playing with toys, eating a meal, or the parent leaving the room for a short period of time. The advantage of this method over the naturalistic method is that the experimenter can control for more extraneous variables and save time. The cost of using a laboratory observation method is that since the subjects know the experimenter is watching them, their behavior may become artificial. Behavior can also be artificial due to the structured lab being too unlike the natural environment.

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, where children explore a set of novel and 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 allows 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/

2.2.2. Case Studies

Psychology also utilizes 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 in one or two individuals, but the disadvantage is that what you are learning may be unrepresentative of the larger population and, therefore, lacks **generalizability**. Case studies are also subject to the interpretation and bias of the researcher in that they decide what is important to include and not include in the final report. 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 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 'play house' 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 behaviors 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 the Research Methods in Psychology textbook by visiting:

https://kpu.pressbooks.pub/psychmethods4e/chapter/observational-research/

2.2.3. Surveys/Self-Report Data

A **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. The actual survey could be tedious for the participant, and **social desirability**, when a participant answers questions dishonestly so that they are 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. If you wanted to know about prejudicial attitudes of a group of people, it could be useful to choose the survey method. You could alternatively gather this information through an interview in a structured or unstructured fashion. **Random sampling** is important component in survey research, where 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 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/

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). The advantage of correlational research is that it allows us to observe statistical relationships between variables. Additionally, correlational research can be used when a researcher is not able to manipulate a variable, as in an experiment. An example of a negative correlation is when a parent becomes more rigid, the attachment of the child to the parent goes down. In contrast, an example of a positive correlation is that as a parent becomes warmer toward the child, the child becomes more attached. However, one must take care not to conflate correlation with causation. Just because there is a statistical relationship between variables does not mean that one caused the other. A *spurious correlation* is one where there is a statistical relationship between variables, but no causation between them.

For a list of examples of spurious correlations visit: https://www.tylervigen.com/spurious-correlations

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 the Research Methods in Psychology textbook by visiting:

https://kpu.pressbooks.pub/psychmethods4e/chapter/correlational-research/

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.

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 the Research Methods in Psychology textbook by visiting:

https://kpu.pressbooks.pub/psychmethods4e/part/experimental-research/

2.2.6. Multi-Method Research

As you have seen above, no single method alone is perfect. Each has strengths and limitations. As such, for psychologists 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 for another purpose. For instance, a researcher may request data from high schools about students' GPA and SAT/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 collective knowledge about human behavior based on converging evidence from different kinds of studies. We can also see where gaps still exist. Research is moved to 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.

Communication of results can be through conferences in the form of posters or oral presentations, newsletters from APA or one of its many divisions or other organizations, or through scientific research journals. Published journal articles represent a form of communication between scientists, and in these articles, the researchers describe how their work relates to previous research, how it replicates or extends this work, what their work might mean theoretically, and what it implies for future research.

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

The abstract is followed by four major sections. The first is the **introduction,** designed to provide a summary of the current literature as it relates to your topic. It helps the reader see how you arrived at your hypothesis, as well as the purpose of your study. Essentially, it gives the logic behind the decisions you made. Also stated in the introduction is the hypothesis. Second is the **Method** section. 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 – the 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. Operational definitions are also stated, a description of any groups included, identification of random sampling or assignment procedures, and information is shared about how a scale was scored. The method section can be loosely thought of 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.

Next is the **Results** section. In this section you state the outcomes of your experiment and whether they were statistically significant or not. In this section, you can also present tables and figures. The final section is the **Discussion.** In this section, your main findings and hypothesis of the study is restated and an interpretation of the findings is offered. Finally, strengths and limitations of the study are stated which will allow you to propose future directions.

Whether you are writing a research paper for a class, 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), Finally, **inter-rater**

reliability describes the consistency of results between different observers. 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 to which we expect it to be related, 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 strive for results will generalize from our sample to the larger population. In the example of case studies, 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, or natural, 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 truly 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 of 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/

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. So why are ethical standards needed and what do they look like?

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

The one psychologist most students know about 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." Surprisingly, Milgram found that 65% of participants/teachers shocked the learner to the XXX switches which would have killed them because they were ordered 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:

https://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,** which is when the true purpose of the study is revealed, they are told where to go if they need assistance, and how to reach the researcher if they have questions. Researchers are even permitted to **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.

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

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

Module Recap

In Module 1, we stated that psychology is the study of behavior and mental processes using strict standards of science. In Module 2, we outlined how this is achieved through the use of the scientific method and use of the research designs of observation, case study, surveys, correlation, and experiments. The importance of valid and reliable measures is described. To give our research legitimacy, we must use clear ethical standards for research which include gaining informed consent from participants, telling them of the risks, giving them the right to withdraw, debriefing them, and using only minimal deception.

3rd edition

II

Part II - Applying Social and Developmental Lenses

Part II – Applying Social and Developmental Lenses

Module 3: Gender Through a Social Psychological Lens

3rd edition as of August 2023

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 which affect who we are attracted to. Loneliness and social rejection are also outlined, as they can have a serious effect on mental health and are discussed in more detail in Module 9. 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

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 identify 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 choose 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, 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 are generally indifferent about us while still accepting us, while we tend to *belong* to individuals who truly care about us and for whom we have an attachment. In this way, 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. Individual differences and characteristics of the target can factor in. One such difference is religiosity. 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, or 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, but our *perception* of being alone is what matters most. This can be particularly troublesome for elderly people. 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 (Tiwari, 2013)." 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? Should loneliness be considered a disease and 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 a warning– owning a pet, if not managed properly, could 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 report that with careful planning, any negative consequences of owning a pet can be mitigated.

Being rejected or ignored by others, called **ostracism**, hurts, even on a physiological level. Research by Kross, Berman, Mischel, Smith, and Wager (2011) have 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.

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 internal and external forms. Internal forms of status refer to confidence, skills, what you believe, or your values. External forms refer to your job, visual markers, and what you own, such as a 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. 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, which 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

So how accurate is this 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. 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 U.S. 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 individual 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 most typical and 16 of the 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. One basis for who we choose to spend time with is in how *attractive* they are. Attractive people are seen as more interesting, happier, smarter, sensitive, and moral, and are consequently liked more than less attractive people. This is partly due to the **halo effect,** or when we hold a favorable attitude toward 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? Lou and Zhang (2009) explored initial attraction for dating in a real-life speed dating setting where it was determined that the strongest predictor of attraction was physical attractiveness, over similarity, reciprocity, and security.

Is beauty linked to a name? 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**, in which our perception of others is influenced by how attractive we perceive them to be. 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 beauty bias still exists, 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.” These expressions contradict one another, so 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) The

same is true for reciprocal desire (Greitmeyer, 2010).

3.1.2.6. Playing hard to get. Does playing hard to get make an individual more desirable than the one who seems eager for an alliance? Results of five experiments said that generally it does not, though a sixth experiment suggested that if a woman is hard for most men to get, but easy for one, that she would be preferred by that individual over another who is uniformly hard or easy to get. Men assigned 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) found that when person B plays hard to get with person A, this will increase A's wanting, but decrease A's liking of B, but only if A is 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, 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 disclose our personal secrets on Facebook to those we like and 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 could make you feel uncomfortable and seek to move to another seat.

3.1.2.8. Mate selection. From an evolutionary psychology perspective, females and males tend to select mates based on factors which increase their chance of reproductive success. Women and men generally have overlapping, but different strategies for this. In a trend observed globally, Buss (2004) said that because the cost for men can produce a nearly unlimited number of children is low, 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 generally favor a more discriminating 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. Women are more likely to seek men who are 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 sought to marry women 2.7 years younger while women preferred men 3.4 years older. This finding emerged cross-culturally.

3.1.3. Types of Relationships

Relationships can take on different forms. In **communal relationships,** there is an expectation of mutual responsiveness from each member as it relates to tending to members' needs, while **exchange relationships** involve the expectation of reciprocity in a form of tit-for-tat strategy. In **intimate or romantic relationships** there is a 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 in further detail.

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 their mother, you would be correct. One strategy some mothers use to punish bad behavior is to withdraw displays of affection to the child until they behave 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 months 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 us 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**. If a friend tells you their deepest, darkest secret, they would likely expect you to do the same. One way many adolescents self-disclose is through 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 the 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 trans women reported more non-affiliated friends.

3.1.3.3. Love/Romantic. 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). 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).

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 will 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. 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)

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 called **jealousy**, or a negative emotional state arising due

to a perceived threat to one's relationship. This threat does not have to be real for jealousy to arise. There is overlap, as well as dissimilarity in what causes jealous emotion in women and men. For women, emotional infidelity and loss of resources for her offspring is of greatest concern, while sexual infidelity is of greater concern to men (Schutzwohl & Koch, 2004). 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. However, jealousy 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/

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, a person whose partner neglected to do the dishes might accuse that partner of not caring about them. 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. 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." 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 increases 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 can be 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 do occasionally hold a grudge, 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:
https://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. Attraction may diminish over time. Maybe we were recovering 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. Believe it or not, something as simple as this can end a relationship. Ruppanner, Branden, and Turunen (2017) demonstrated this 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 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. The **second shift** 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

- State 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. **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 toward puppies, the affective component will manifest by our feeling or outwardly saying that we love puppies (or do not like them if that is the case). 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 hypothesizing that when the participant identified highly with the group to which a negative stereotype applies, they were more likely to be inhibited by the performance inhibiting effects of the stereotype. The sample included male and female college students and specifically examined 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 similar to that of 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 can lead them to avoid taking the class and be underrepresented in many professions, particularly STEM related fields. Kapitanoff and Pandey (2017) proposed that gender of the instructor can also play a role 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 led to acceptance of the stereotype while for men no significant relationships were found. Though further research is necessary to determine causation, performance on the first exam was initially lower for women with a female instructor but over time, performance improved.

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. **Discrimination** is when a person *acts* in a negative way toward an individual or a group. 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/.)

If you consider these terms, stereotype and prejudice seem to go together. Taking a step back from the current conversation, think about a political candidate. You are 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 certain ways. If we like the candidate, we will vote for them. We might also campaign for them or mention them to others in conversation. The point is that the thoughts and feelings accompany one another. Behavior arises as a result of these thoughts and feelings. The same would be true of stereotypes and prejudice which go together, and these lead to behavior as well.

Can a person 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. If you made a snide comment about a fellow employee of another race, gender, sexual orientation, or ethnic group, this could lead to disciplinary action, termination of employment, or worse. Outside of work, discriminatory comments could lead to legal action against you. So even if one holds such beliefs and feelings, most people keep them to themselves.

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. 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 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

Explicit attitudes are attitudes that are obvious, known, and at the level of conscious awareness. Is it also possible that we might not even be aware we hold certain attitudes toward 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) shows 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.

Reading about the IAT is not the same as taking one of the tests. Check out the Project Implicit website for yourself – https://implicit.harvard.edu/implicit/

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 non-providers 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. 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 they are 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." 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 rejecting an applicant, 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.

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 leads 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 – 'It's 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 workplace, please visit: https://www.eeoc.gov/laws/types/sex.cfm.

3.2.3.3. Ageism. 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 workplace, please visit: https://www.eeoc.gov/laws/types/age.cfm.

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 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/.

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/

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: https://www.eeoc.gov/laws/types/disability.cfm.

3.2.3.6. Sexual orientation (LGBTQ+) 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 LGBTQ+ charges file in 2014. For more on sexual orientation discrimination in the workplace, please visit:

https://www.eeoc.gov/training/2023/08/lgbtq-rights-workplace-and-eeoc-legal-updates

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 while 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 *prototypes*, 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 come as no surprise 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 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. 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 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 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 unconditioned 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. Pavlov realized that dogs salivated even before they had the food in front of them, when they heard the sound of a bell which preceded feeding times (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.

For a broader discussion of respondent conditioning, please visit my Principles of Learning and Behavior OER:
https://opentext.wsu.edu/principles-of-learning-and-behavior/chapter/module-4-respondent-conditioning/

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.

- **Positive Punishment (PP)** – If something bad or aversive is given or added, then the behavior is less likely to occur in the future. If a child throws a tantrum and their parent spanks them, this is a PP. The tantrum led to the consequence of the aversive spanking being delivered. 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 gay person 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 do not seem to go together and are counterintuitive. However, you experience NR all the time. Negative reinforcement is when something bad or aversive is taken away or subtracted due to your actions, making you more likely to engage in the same behavior in the future. 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.

For a broader discussion of operant conditioning, please visit my Principles of Learning and Behavior OER:
https://opentext.wsu.edu/principles-of-learning-and-behavior/chapter/module-6-operant-conditioning/

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. In a 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

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

Another line of thinking asserts 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. They also 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 their 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 they are being treated prejudicially (Crocker & Major, 1989). Though no one would want to be discriminated against or to 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 Learning for Justice movement (https://www.learningforjustice.org/), 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

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

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). 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).

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/:

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/

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.
- Clarify how gender role stress explains violence.
- Clarify how gender role conflict (GRC) theory explains violence.

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 violent 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/

There are three types of aggression. 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; maintaining 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

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

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.

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

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 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/fastfact.html
- https://www.stopbullying.gov/what-is-bullying/index.html

For more on cyberbullying, please visit:

- https://www.pacer.org/bullying/resources/cyberbullying/

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**. Men experience pressure to adhere to masculine norms, including aggression and violence. 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 anti-femininity 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. This discussion included an overview of the need for affiliation and the experiences of loneliness and social rejection. We then discussed factors affecting interpersonal attractiveness, relationship types, and Gottman's Four Horsemen of the Apocalypse. Forgiveness is critical in relationships but still, dissolution may occur.

In Section 3.2 we tackled attitudes and how they can lead to stereotypes, prejudice, and discrimination. It was shown how intergroup rivalry and conflict can occur over limited resources. Tolerance was defined, ways to promote it and improve intergroup relations were outlined, and we described the Jigsaw classroom.

Finally, aggression was defined and the various forms it can take were described. We also clarified how

gender role stress and gender role conflict (GRC) theory explain violence.

We hope you found this module interesting and are ready to continue examining gender through other lenses.

3rd edition

Module 4: Gender Through a Developmental Psychology Lens

3rd edition as of August 2023

Module Overview

In this module, we will focus on various theories that have attempted to explain gender development. We will start at the beginning with various psychoanalytic theories. Then we will examine various factors that impact gender socialization while also uncovering two common social theories – social learning theory and social cognitive theory. We will explore Kohlberg's cognitive development theory and how he explained gender development. We will also learn about gender schema theory. Finally, we will briefly outline biologically based theories of gender development.

Module Outline

Module Learning Outcomes

- Clarify how psychoanalysis relates to gender development.
- Explain how the socialization of gender occurs.
- Clarify cognitive theories of psychology and how they apply to gender.
- Clarify biological factors and how they relate to gender in psychology.

4.1. Psychoanalytic Theories

Section Learning Objectives

- Describe psychoanalytic theory.
- Clarify how Freud theorized gender and how his theory applies to gender in psychology.
- Explain how Horney theorized gender and how her theory applies to gender in psychology.

You might remember learning about psychoanalytic theory in your Introduction to Psychology class. Here we will provide a review of what you learned. Psychoanalysis was one of the very first theories in psychology, used originally by Sigmund Freud. Psychoanalytic theory centers around very early life experiences. It was theorized that the psyche of an individual is impacted significantly by major and minor events, as early as infancy. According to Freud, the functioning of individuals is impacted in adulthood by these events, which cause psychopathology. Freud theorized that psychosomatic distress of an individual (physical symptoms that occur due to psychological distress) was a manifestation of internal conflicts. The internal conflict often occured in the subconscious, meaning an individual did not realize events had occurred and were impacting their current functioning. Freud and other psychoanalysts believed that one must uncover these subconscious events through talk therapy, the only way to resolve internal conflict in the subconscious and alleviate the physical and psychological maladjustment presented in the individual.

4.1.1. Sigmund Freud's Psychosexual Theory

In 1895, the book, *Studies on Hysteria*, was published by Josef Breuer (1842-1925) and Sigmund Freud (1856-1939), and marked the birth of psychoanalysis, though Freud did not use this term until later. The book published several case studies, including that of Anna O., born February 27, 1859 in Vienna to Jewish parents Siegmund and Recha Pappenheim, who were strict, wealthy Orthodox adherents. Bertha, known in published case studies as Anna O., was expected to complete the formal education typical of upper-middle-class girls, which included foreign language, religion, horseback riding, needlepoint, and piano. She felt confined and suffocated in this life and took to a fantasy world she called her "private theater." As Bertha cared for her dying father, she developed symptoms such as memory loss, paralysis, disturbed eye movements, reduced speech, nausea, and mental deterioration, and was diagnosed by Breuer with hysteria, which is no longer considered a valid medical diagnosis. Hypnosis was used, which appeared to relieve her symptoms, as it had for many patients (See Module 1). Breuer made daily visits and allowed her to share stories from her private theater, which she came to call "talking cure" or "chimney sweeping." Many of the stories she shared were troubling thoughts or events and reliving them helped to relieve or eliminate the symptoms. Breuer's wife, Mathilde, became jealous of her husband's relationship with Bertha, leading Breuer to terminate treatment in June of 1882 before she had fully recovered. She relapsed and was admitted to Bellevue Sanatorium on July 1, eventually being released in October of the same year. With time, Bertha did recover and became a prominent member of the Jewish Community, involving herself in social work, volunteering at soup kitchens, and becoming 'House Mother' at an orphanage for Jewish girls in 1895. Bertha (Anna O.) became involved in the German Feminist movement, and in 1904 founded the League of Jewish Women. She published many short stories; a play called *Women's Rights*, in which she criticized the economic and sexual exploitation of women. She also wrote a book called *The Jewish Problem in Galicia*, in which she blamed the poverty of the Jews of Eastern Europe on their lack of education. In 1935, Bertha was diagnosed with a tumor, and in 1936, she was summoned by the Gestapo to explain anti-Hitler statements she had allegedly made. She died shortly after this interrogation on May 28, 1936. Freud considered the talking cure of Anna O. to be the origin of psychoanalytic therapy and what would come to be called the cathartic method.

4.1.1.1. The structure of personality. Freud's psychoanalysis was unique in the history of

psychology because it did not arise within universities as did most major schools of thought; rather, it emerged from medicine and psychiatry to address psychopathology and examine the unconscious. Freud believed consciousness had three levels – 1) **consciousness** which was the seat of our awareness, 2) **preconscious** that included all of our sensations, thoughts, memories, and feelings, and 3) the **unconscious**, which was not available to us. The contents of the unconscious could move from the unconscious to preconscious, but to do so, it had to pass a Gate Keeper. Content that was turned away was said to be repressed.

According to Freud, personality has three parts – the id, superego, and ego, and from these our behavior arises. First, the **id** is the impulsive part that expresses our sexual and aggressive instincts. It is present at birth, completely unconscious, and operates on the *pleasure principle*, resulting in selfishly seeking immediate gratification of our needs no matter what the cost. The second part of personality emerges after birth with early formative experiences and is called the **ego**. The ego attempts to mediate the desires of the id against the demands of reality, and eventually, the moral limitations or guidelines of the superego. It operates on the *reality principle*, or an awareness of the need to adjust behavior, to meet the demands of our environment. The last part of the personality to develop is the **superego**, which represents society's expectations, moral standards, rules, and represents our conscience. It leads us to adopt our parent's values as we come to realize that many of the id's impulses are unacceptable. Still, we violate these values at times and experience feelings of guilt. The superego is partly conscious but mostly unconscious, and part of it becomes our conscience. The three parts of personality generally work together well and compromise, leading to a healthy personality, but if the conflict is not resolved, intrapsychic conflicts can arise and lead to mental disorders.

Freud believed personality develops over five distinct stages in which the libido focuses on different parts of the body. First, **libido** is the psychic energy that drives a person to pleasurable thoughts and behaviors. Our life instincts, or **Eros**, are manifested through it and are the creative forces that sustain life. They include hunger, thirst, self-preservation, and sex. In contrast, **Thanatos**, our death instinct, is either directed inward as in the case of suicide and masochism or outward via hatred and aggression. Both types of instincts are sources of stimulation in the body and create a state of tension that is unpleasant, thereby motivating us to reduce them. Consider hunger, and the associated rumbling of our stomach, fatigue, lack of energy, etc., that motivates us to find and eat food. If we are angry at someone, we may engage in physical or relational aggression to alleviate this stimulation.

4.1.1.2. The development of personality. Freud's psychosexual stages of personality development are listed below. According to his theory, people may become **fixated** at any stage, meaning they become stuck, thereby affecting later development and possibly leading to abnormal functioning, or psychopathology.

1. **Oral Stage** – Beginning at birth and lasting to 24 months, the libido is focused on the mouth. Sexual tension is relieved by sucking and swallowing at first, and then later by chewing and biting as baby teeth come in. Fixation is linked to a lack of confidence, argumentativeness, and sarcasm.
2. **Anal Stage** – Lasting from 2-3 years, the libido is focused on the anus as toilet training occurs. If parents are too lenient, children may become messy or unorganized. If parents are too strict, children may become obstinate, stingy, or orderly.
3. **Phallic Stage** – Occurring from about age 3 to 5-6 years, the libido is focused on the genitals, and children develop an attachment to the parent of the opposite sex and are jealous of the same-sex parent. The *Oedipus complex* develops in boys and results in the son falling in love with his mother while fearing that his father will find out and castrate him. Meanwhile, girls fall in love

with the father and fear that their mother will find out, called the *Electra complex*. A fixation at this stage may result in low self-esteem, feelings of worthlessness, and shyness.
4. **Latency Stage** – From 6-12 years of age, children lose interest in sexual behavior, so boys play with boys and girls with girls. Neither sex pays much attention to the opposite sex.
5. **Genital Stage** – Beginning at puberty, sexual impulses reawaken and unfulfilled desires from infancy and childhood can be satisfied during lovemaking.

4.1.1.3. The Oedipus complex and phallic stage. 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'.

Freud named the Phallic stage after Oedipus, who legendarily killed his father and married his mother in Greek mythology. Briefly, Oedipus was separated from his mother and father early in life. He later unknowingly killed his father in battle and married a woman later discovered to be his mother. When his mother learned she had married her son, she hung herself and Oedipus poked out both of his eyes (McLeod, 2008).

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. 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 to his mother, which is known as *castration anxiety*. To help manage this conflict, the superego develops, and the boy transfers his desire for his mother onto other women, in general. Thus, the conflict is resolved (McLeod, 2008; Sammons, n.d.).

To read more about a case that Freud worked on that directly which outlines the Oedipus complex, https://www.simplypsychology.org/little-hans.html has a summary of the story of Little Hans.

Alternatively, Freud believed girls were distressed that they had no penis, referred to as *penis envy*, and resented their mother for this. This was sometimes described as the Electra Complex. Girls begin desiring their father at this time and become jealous of their mother. Similarly, to boys, the development of the superego allows girls to resolve this conflict. According to Freud, she eventually accepts that she cannot have a penis, nor have her father, and transfers this desire onto other men and the desire for a penis becomes a desire for a baby, ideally, a baby boy; Sammons, n.d.). 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 occurs; rather impulses are repressed. However, in the Genital stage, Freud theorized that adolescents experiment sexually and begin to settle into romantic relationships. Freud believed healthy development leads to the sexual drive being released through heterosexual intercourse; however, fixations or incomplete resolutions of conflict in this stage may lead to sexual abnormalities (e.g., preference for oral sex rather than intercourse, homosexual relations, etc.; McLeod, 2008). In this way, there is an underlying assumption that healthy development equals heterosexuality, which is one of several criticisms of Freud's theory (Sammons, n.d.).

4.1.2. Karen Horney

Horney developed a Neo-Freudian theory of personality development that recognized some points of Freud's theory as acceptable, but also criticized his theory as being overly biased toward the male. According to Frued, one must have a penis to develop fully. A female can never fully resolve penis envy, and if Freud's theory is to be taken literally, a female can never fully resolve the core conflict of the Phallic Stage, always having some fixation and consequently, maladaptive development. Horney disputed this (Harris, 2016). In fact, she countered Freud's penis envy with womb envy (a man envying a woman's ability to have children). She theorized that men attempted to compensate for their inability 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 called *basic evil*. As mentioned, these types of experiences (basic evil) lead to maladaptive development which was theorized to occur because the individual begins 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 were dependent on them (Harris, 2016).

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

Table 4.1: 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.
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*, the feeling of inferiority due to one's sex. She noted that one's family can strongly influence their development (or lack thereof) of this complex. If a female was disappointed by males in her family (such as her father or brother, etc.), or if they were overly threatened by females in their family (especially their mothers), they may 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 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).

4.2. Gender Socialization

Section Learning Objectives

- Describe the theory of socialization.
- Describe how gender is socialized.
- Describe socialization theories regarding gender.

Early theories of gender development recognized the importance of environmental or familial influences, 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 briefly but will focus more on major concepts and generally accepted processes.

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

Theories suggesting gender identity development is universal across 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. Nature and nurture play important roles and to ignore one is to misunderstand 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.

4.2.1. Early Life

Infants do not prefer gendered toys (Bussey, 2014). However, by age 2, they show preferences. (Servin, Bhlin, & Berlin, 1999). 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). They can also pair male and female voices with male and female faces, known as intermodal gender knowledge (Poulin-Dubois, Serbin, Kenyon, & Derbyshire, 1994). This occurs before they can even talk. Additionally, 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. Notably, this has been found to occur in preverbal children (Fagot, 1974). 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. If an infant is shown a doll, they will look at a photograph of a girl, rather than a boy, for longer duration than a photograph of a boy when they are side by side. This is specifically true for girls as young as 18-24 months; however, boys do not show this distinction quite as early (Serbin,Poulin-Dubois, Colburne, Sen, & Eichstedt, 2001). Although adherence to gender stereotypes is rigid initially, as children get enter middle childhood, they learn more about flexible and evolving stereotypes. (Bussey, 2014). However, in adolescence, they become more rigid again. Generally, boys are more rigid, and girls are more flexible with adherence to these stereotypes (Blakemore et al., 2009).

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

4.2.2. 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. Oftentimes, the first question is, "Are you going to find out the sex of the baby?" In this way children begin gender socialization before they are even born. Boy and girl names are chosen, particular colors for nurseries, types of clothing, and decor, all based on a child's gender (Bussey, 2014). The infant is born into a gendered world without having much of a chance to develop their own preferences. Parents also respond to children differently, based on their gender. For example, in a study in which adults observed an infant that was crying, they described the infant to be scared or afraid when 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. Mothers modeled this behavior, and children later began to model the same behavior. Furthermore, as

children aged, mothers then affirmed children's gender generalization statements when made.

Boys are more gender-typed, and fathers place more importance 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.

4.2.3. Peers

Peers are strong influences regarding gender and how children play. As children get older, peers become increasingly influential. In early childhood, peers are direct about guiding gender-typical behaviors. As children get older, their corrective feedback becomes subtler. 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 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 segregate instead (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. Furthermore, boys tend to be very unforgiving and intolerant of nonconforming gender play (Fagot, 1984).

4.2.4. 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 more recently. We have seen a slight shift in this in many media forms beginning 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 hold (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).

4.2.5. 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 towards 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, it is worthwhile to consider what could happen if we saw a shift in that focus.

4.2.6. Social Theories

4.2.6.1. Social learning theory. Consider this. You walk into a gym for the first time. It is full of equipment you are not sure how to use it, and there are no instructions posted for how to use it. What do you do? The most likely strategy, if there is no employee around to ask, is to watch how someone else operates the machine to copy the method. This is called *modeling*, where you model the behavior of the person ahead of you. 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 mimic this. Here is the interesting part: modeling does not 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, what behavior is accepted and desired

by others, what is not, etc. Then we engage in those behaviors (or avoid them). We then become models for others as well. It should be noted that the amount of 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, discussed later, is one such theorist.

4.2.6.2. Social cognitive theory. Another theory combines the theory of social learning with cognitive theories. While modeling in social learning is informative, it does not explain everything. This is because we do not just model behavior, we also monitor how others react to our behaviors. For example, say a little girl is playing with a truck and her peers laugh at her. That is feedback that her behavior is not gender-normative, so she might change the behavior she engages in to conform. We also get direct instruction on how to behave as well. Girls do not sit with their legs open, boys do not play with dolls, girls do not get muddy and dirty, boys do not cry, etc. Peers or adults directly instructing another person on what a child should or should not to do is an 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 states 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. The theory suggests that these things impact and interact with various factors (Bussey & Bandura, 2005). Additionally, this theory also accounts for the entire lifespan development, which is drastically different than earlier theories, such as psychodynamic theories, focusing solely on childhood and adolescence.

4.3. Cognitive Theories

Section Learning Objectives

- Describe Kohlberg's theory of gender.
- Define and describe gender schema theory.

4.3.1. Kohlberg's Cognitive Developmental Theory

Lawrence Kohlberg proposed 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, gender socialization occurs when children recognize that gender is constant and does not change, referred to 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 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 (though 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 the cognitive capacity for gender constancy, as discussed earlier.

4.3.2. Gender Schema Theory

Gender schema theory, maintains that children acquire knowledge about gender roles and develop gender identity though cognitive development theory and incorporates some elements of social learning as well. Schemas are the beliefs and expectations of an individual about gender based on experiences within their culture. These schemas affect the way children process and retain information about gender and influence the way they interact with the world. According to this theory, children seek information consistent with their schema, and are likely to remember and focus on information that is significant to their gender identity. This can lead to gender-typical behavior, such as boys playing with Legos, as well as stereotypes, such as the belief that women enjoy cooking. Within this theory, children actively create their schemas about gender by keeping or discarding information obtained through their experiences in their environment (Dinella, 2017). In this way, schemas can be thought of as a sort of cheat-sheet for how to behave. There are two variations of gender schema theory, one created by Bem and the other by Martin and Halverson, though the differences between the two will not be discussed in this book (Dinella, 2017).

Two types of schemas are relevant in gender schema theory – superordinate schemas and own-sex schemas. **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).

Children likely develop schemas in three different phases. In the first, called **gender labeling**, when children are 2 to 3 years old, they begin to recognize gender groups and label themselves as one gender. This is when the schema starts to build. Next is the **gender** stability phase. This is a rigid phase from age 3 to 4, in which opinions about behaviors and preferences are polarized as either appropriate or not appropriate for respective genders. There is little flexibility in schemas at this phase. The last phase is **gender constancy**, a phase in which children recognize that gender remains constant, despite external changes of appearance, so schemas become more complex and flexibility and overlap between gender presentations is permitted (Dinella, 2017).

Let's consider a real-world example. Once a child can label their own gender, 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 should not cook which will lead him to avoid it. 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-typical 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 labeled 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).

4.4 Biological Theories

Section Learning Objectives

- Outline biological theories.
- Clarify how biology may impact gender development through evolution, genetics, epigenetics, and learning.

Regarding 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.* The four areas of focus include (1) evolutionary theories, (2) genetic theories, (3) epigenetic theories, and (4) learning theories.

4.4.1. Evolutionary 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. Evolutionarily, gender roles were divided by necessity, with females focusing on rearing children and gathering food close to home, and males leaving to hunt, compete with males from other human groups, 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 for ancient hominids, it does not account for what we see in modern, egalitarian homes and cultures.

Kinship-based explanations reason that very early on, humans 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 fittest traits, survived and reproduced. Given that this came down to survival of the fittest groups, it made sense to divvy up tasks and important behaviors. 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, compared to sex-based

theories (Bevan, 2017).

Lastly, *socio-cognitive* explanations propose that we have changed our environment, and that we have changed in the environment in which natural selection occurs. When we use our cognitive abilities to create things, such as tools, we change our environment. We are then changing the environment that defined what behaviors and assets were necessary to survive. For example, if we can now use tools to hunt more effectively, the former need of a male, as explained in sex-based theories, becomes unnecessary for the task (Bevan, 2017).

4.4.2. Genetic-based Theories

We can be "genetically predisposed" to many things such as 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 shown that there is a genetic predisposition where gender is concerned. Specifically, twin studies have shown that nonconforming gender traits, or transgender, is linked to genetic gender predispositions. 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.* You can also view an educational YouTube video that summarizes David's case (https://www.youtube.com/watch?v=JfeGf4Ei7F0) as well as a short clip from an Oprah show featuring David's family (linked here: https://www.youtube.com/watch?v=vz_7EQWZjmM).

4.4.3. Epigenetics

Epigenetics does not look at DNA, but rather things that may impact DNA mutations or the expression of DNA. 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, 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 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 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 this is complicated and other hormones and chemicals are at play. However, for this book, 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 for up 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 appears that gender development in those exposed to DES, particularly males, is greatly impacted (Bevan, 2017).

4.4.4. Learning

Okay, before we get too far, you are probably wondering how learning is related to biological theories. This is due to the areas of the brain that are impacted. So, as we *very briefly* review this, our focus will be on the different brain structures that impact specific aspects of learning. Within learning-based biological theories, there are five types of learning purported 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 and focuses on learning sequencing for behaviors. And lastly, *nondeclarative emotional learning* involves the amygdala and hypothalamus. This is learning in which we obtain behavioral feedback from people and our environment and make adjustments based on that (Bevan, 2017).

Module Recap

In this module, we created a foundational knowledge of several theories of gender development. We learned about the psychodynamic theories of Freud and Horney. We then jumped into social-based theories of social learning theory 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.

III

Part III - Applying a Biological Lens

Part III – Applying a Biological Lens

Module 5: Gender Through a Human Sexuality Lens

3rd edition as of August 2023

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

Module Learning Outcomes

- Describe the origins of the study of sexual behavior.
- Identify sex education programs in the U.S.
- Define sexual orientation and describe the complexities of identity, attraction, expression, and anatomical sex.
- Clarify how gender roles impact sexual behaviors.

5.1. Sexology

Section Learning Objectives

- Describe the beginnings of sexology by Dr. Alfred Kinsey.
- Clarify Masters and Johnsons contribution to our knowledge about the human sexual response cycle.
- Describe findings of the largest U.S. study of sexual behaviors.

5.1.1. Alfred C. Kinsey

Dr. Alfred C. Kinsey, a biologist, sexologist, and zoologist, founded the Institute for Sex Research in 1947 located at Indiana University. In 1981, the institute was renamed The Kinsey Institute for Sex Research ("Dr. Alfred C. Kinsey," n.d.).

Kinsey is often credited for shifting the perception and understanding of human sexuality through empirical research. This was monumental, because former study of human sexual behavior had been limited to moralistic judgements and anecdotal evidence. His research focused on frequencies and occurrences of sexual behavior and included thousands of face-to-face interviews to obtain sexual histories, believing this method would increase the likelihood of obtaining honest answers ("Dr. Alfred C. Kinsey," n.d.). 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 breach of identities of those interviewed. Eventually, Kinsey and his team gathered the sexual histories of 18,000 individuals.

Here is one such example: https://www.youtube.com/watch?v=TIGzC_Fmh5c.

The collected sexual histories were published by Kinsey in two separate works: *Sexual Behavior in the Human Male,* published in 1948, and *Sexual Behavior in the Human Female*, published in 1953. 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). A link cannot be provided as 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 self-reported sexual history from 0 to 6. The numbers reflect a continuum on which the extreme low score indicates solely heterosexual behaviors and attraction, the highest score reflects solely same-sex behavior and attraction, and the middle area of the spectrum reflects varying attraction and behavior for both sexes. ("The Kinsey Scale," n.d.).

5.1.2. Masters and Johnson

Shortly after Kinsey laid the foundation for sexual research, William Masters and Virginia Johnson began researching human sexual responses in the late 1950's. Although Kinsey had focused on the frequency of various sexual behaviors, Masters and Johnson sought to study 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). Masters and Johnson were criticized for participant samples that weren't representative of the population, being predominantly middle-class, white, and heterosexual. Sex workers were also used in their research, which drew scrutiny over issues of ethics.

Masters and Johnson are most known for their **sexual response cycle theory**. Prior to this, not much was known about the cycle and process of sexual responses. Their theory proposed that sexual response occurs in four stages: Excitement (1), Plateau (2), Orgasm (3), and Resolution (4) (Crooks & Baur,

2013).

1. **Excitement Phase –** This is when *myotonia* (i.e. muscle tension increases throughout the body and both involuntary contractions as well as voluntary muscle contractions), *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 occur.
2. **Plateau Phase –** During this phase, there is a surge of tension that begins and then continues to increase in the body. Blood pressure and heart rate 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 –** This is typically the shortest phase and is the climax period in which blood pressure and heart rate peak and involuntary pelvic muscle spasms occur, accompanied by intense physical pleasure.
4. **Resolution Phase –** When myotonia and vasocongestion dissipate and the body returns to a state of pre-arousal.

This same cycle, and order, is experienced no matter the sexual stimulation/activity (e.g., masturbation, vaginal intercourse). How intense the cycle/phases are, and how rapidly one moves through them, varies depending on the sexual activity. Moreover, men and women experience each stage in the same order, but there are some differences within the cycle between men and women. For example, women may more easily experience multiple orgasms than men, though it is possible for men to have them. Additionally, while men and women both experience a refractory period after climax, the length of refractory time may be different (Humphries & Cioe, 2009). Another important difference is that although men and women experience these phases in the same order, males move through the entire cycle significantly more often than women during heterosexual encounters (Mahar et al., 2020). One study showed that 80 percent of women pretended to reach the orgasm phase of the cycle about half the time during vaginal intercourse (Brewer & Hendrie, 2011).

5.1.3. National Survey of Sexual Health and Behavior

Indiana University is also known for 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 age from 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.).

Results from the first wave of data collection 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 more likely than women to have an orgasm during vaginal intercourse; 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.).

5.2. Sex Education

Section Learning Objectives

- Describe sex education programs.
- Describe comprehensive sex education programs and clarify how effective they are.

5.2.1. Overview

Sex education varies greatly throughout the United States, being either a) abstinence-only (AO) in which abstaining from sexual activity is taught to be the only option to avoid negative outcomes related to sex; b) abstinence-plus (Aplus) in which abstinence is encouraged but some information about contraception and condoms is given; c) or comprehensive (CSE) in which medically-accurate information about sex, reproduction, protection and contraception, gender identity, and sexual orientation is covered. Although about half of U.S. states require that some form of sex education be provided, only 13 require the material presented to be medically accurate. Moreover, most 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 making it highly incentivized. AO programs peaked during the Bush administration and then began dropping during the Obama 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 those claims. In fact, studies reveal that when teens who received abstinence-based education had sex, that it was more likely to be unprotected. Additionally, although youth educated through this program 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 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.

5.2.2. 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 fewer occurrences of teen pregnancy compared to youth that received no programming, but no significant difference in rates occurred 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 were found to be less likely to have sex in general, more likely to delay their first sexual encounter, have fewer sexual partners, and when they have sex are more likely to engage in protected sex compared to youth that receive AO programming (Abstinence Education Programs, 2018).

5.3. Sexual Orientation

Section Learning Objectives

- Clarify what the Genderbread Person is and how it helps conceptualize sexual orientation and identity.
- Identify and define the various sexual orientations.

Sexual orientation is the part of one’s identity that involves attraction to another person, whether in a sexual, emotional, physical, or romantic way. 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 considering orientation on a continuum that includes a variety of orientations, which we will discuss.

5.3.1. 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.

5.3.1.1. 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).

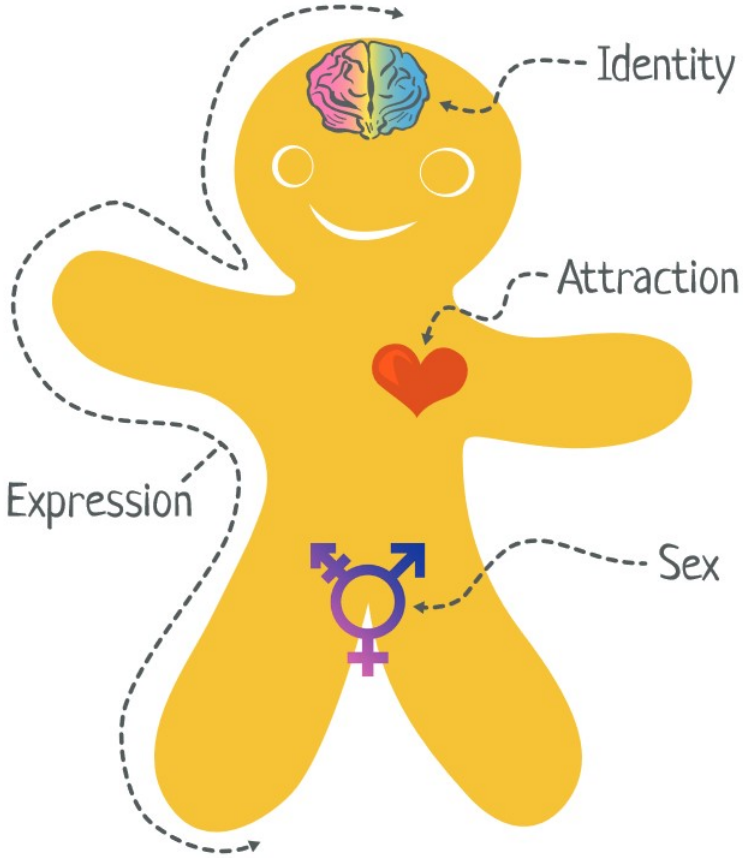
5.3.1.2. Gender identity. This deals more cognitions and thoughts about ourselves and is how we identify. One can be biologically female but identify as a man. Like orientation, there is a continuum of identification. Identity is not determined by either anatomical sex, gender expression, or sexual or romantic attractions. One may be biologically female, identify as a man, wear stereotypically feminine clothes, be attracted sexually to men, and be attracted romantically to women – or any combination or variation.

5.3.1.3. 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 woman getting ready for a date with her wife may dress up and express very feminine gender norms; however, that same woman may have expressed very masculine norms and behaviors an hour earlier when playing in her recreational dodgeball league.

5.3.1.4. Attraction. When discussing attraction, we need to be aware that it takes two forms – sexual and romantic. 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 women. 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.

The Genderbread Person v4

by it's pronounced METROsexual .com



⊘ means a lack of what's on the right side

Gender Identity
- ⊘ → Woman-ness
- ⊘ → Man-ness

Gender Expression
- ⊘ → Femininity
- ⊘ → Masculinity

Anatomical Sex
- ⊘ → Female-ness
- ⊘ → Male-ness

Identity ≠ Expression ≠ Sex
Gender ≠ Sexual Orientation

Sex Assigned At Birth
☐ Female ☐ Intersex ☐ Male

Sexually Attracted to... and/or (a/o)
- ⊘ → Women a/o Feminine a/o Female People
- ⊘ → Men a/o Masculine a/o Male People

Romantically Attracted to...
- ⊘ → Women a/o Feminine a/o Female People
- ⊘ → Men a/o Masculine a/o Male People

For a bigger bite, read more at www.genderbread.org

Figure 5.1. Genderbread Person (direct source: Sam Killerman – https://www.genderbread.org/wp-content/uploads/2018/10/Genderbread-Person-v4.pdf)

5.3.2. 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 as to whether 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).

Being asexual does not mean an individual refrains from 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).

5.3.3. Heterosexual

Heterosexual is defined as being solely 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.

5.3.4. 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 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 described as bisexual. Women are more likely to identify as bisexual than men (Copen, Chandra, & Febo-Vazquez, 2016). Women are also are more accepting of bisexual individuals then men. In general, bisexual women are more accepted than bisexual men in society (Dodge et al., 2016).

5.3.5. 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).

5.4. Transgender

Section Learning Objectives

- Define the term transgender.
- Describe gender dysphoria.
- Describe the process of transitioning.

5.4.1. 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 align with their self-identified gender more closely. Although some transgender individuals may wish to seek medical interventions, one should not assume that someone that is transgender has a desire to pursue such 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 align with their gender identity more closely if they do not 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 0.3% of adults identify as transgender. About 27% of MtF individuals are attracted to men, 35% to women, and 38% to both men and women. About 10% of FtM individuals are attracted to men, 55% to women, and 5% to both men and women (Copen, Chandra, & Febo-Vazquez, 2016; Gates, 2011).

5.4.2. 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 from sexual orientation.

5.4.3. Transitioning

Transitioning is the process of moving from living one's life as the gender that aligns to their birth sex, to the gender to which the individual identifies. Transitioning can involve a variety of steps, 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.

5.4.3.1. MtF. Surgery may consist of facial feminization in which plastic surgeries are conducted to feminize one's face, breast augmentations, either the enhancement or 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.).

5.4.3.2. 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.).

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

5.5. Gender Roles and Rules for Sexual Behavior

Section Learning Objectives

- Define sexual script theory.
- Describe scripts for sexual behavior.
- Defend the existence of a double standard.
- Describe the hookup culture.

5.5.1. Scripts for Sexual Behavior

Sexual script theory proposes 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 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 a man in a heterosexual relationship is the one who always initiates sex in the beginning (based on sexual script), then over time, his partner may continually wait for him to initiate sex in the future. This is now an interpersonally-based script that started from a broader, culturally-based script. This may become internalized and repeated in other relationships for the woman (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 women, etc.; intrapersonal experience).

The *heterosexual script* is the most prominent in the US, and it consists largely of three specific components including a double standard, courtship roles, and desire for commitment (Helgeson, 2012).

As for the double standard, 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. Women are expected not to engage in sex outside of a relationship, whereas men are expected, and often praised, for doing so. Men are supposed to desire sex whereas women should resist it (Seabrook, et al., 2016). In terms of courtship roles, 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. In relation to commitment, whereas women are scripted to desire intimacy, trust, and committed relationships, men are not (Masters, Casey, Wells, & Morrison, 2013).

Research by Garcia (2010) suggests that there could be a risk to rejecting adherence to scripts. If a man holds a belief in a traditional sexual script, such as men being the breadwinners, he might criticize his partner for her career accomplishments. She may also be judged negatively and experience direct or indirect 'punishment' or negative consequences as a result of the non-conforming behavior (Garcia, 2010). This in no way substantiates or validates the script, but points to the fact that communication in a relationship is key, and early on. Both individuals should set clear expectations of their partner from the beginning to avoid awkward situations such as this.

5.5.2. Researching the Double Standard

The double standard in sexual behavior began to be researched in the 1960's by Ira Reiss. Reiss studied the double standard in the context that society prohibited women to engage in premarital sexual behavior but allowed men to do so (as cited by Mihausen & Herold, 1999). The double standard impacts a variety of sexual factors such as age of first intercourse (men being younger), 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 females are often shamed. Males are more accepted by their peers as sexual partner counts increase whereas females are less accepted by their peers (Kraeger & Staff, 2009). Kraeger (2016) also found that a girl having a sexual history, 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 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 though the research shows that men tend to hold double standards. Overall, on average, the double standard is still 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 (Sprecher, Treger, & Sakaluk, 2013; Allison and Risman, 2013).

5.5.3. 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 U.S. 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 term *friends with benefits* (FWB) describes 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 reversed – about 25% feel positive, 50% feel negative, and 25% report mixed feelings. Although the 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 less than 24 hours before and someone 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 hookups 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 have lower self-esteem are more likely to participate in hooking up. (Garcia et al., 2013). The impact of hookups varies as well. If an individual experienced high levels of depression and loneliness, they sometimes report experiencing a reduction in this following a hookup. However, if an individual did not have depressive symptoms prior to a hookup, they 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 the "hookup culture."

3rd edition

Module 6: Gender Through a Cognitive Psychology Lens

3rd edition as of August 2023

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 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. Finally, we discuss how perceived differences may impact our performance.

Module Outline

Module Learning Outcomes

- Differentiate gendered versus nongender language.
- Clarify how gender impacts communication and language patterns.
- Outline the similarities and differences in cognitive development and abilities across gender.
- Clarify real differences in abilities and perceived differences in abilities across gender.
- Explain how perceived differences may impact stereotypes and how those stereotypes then impact performance.

6.1. Language

Section Learning Objectives

- List differences in how males and females communicate and use language.
- Contrast gender versus nongendered language and their impacts.

6.1.1. Sex and Gender Differences in Language

Language can impact many components of our lives. The way people speak to us, the words we choose,

and the meaning attached to them highly influences our experience. Have you ever noticed you communicate differently than someone else, or that you modify your way of communicating based on the person you are interacting with? You probably answered yes, and that is common. Have you ever wondered if your communication changes depending on whether you are speaking with a male or a female, or how your own sex impacts the way you communicate?

Before diving in, let's discuss affiliative and assertive speech. *Affiliative speech* is 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, "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 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 shows that though girls talk more than boys during childhood (Carli, 2017; Leaper & Smith, 2004), men talk more than women in adulthood (Leaper & Ayres, 2007). In childhood, boys use more assertive speech, whereas girls engage in more affiliative speech, but again, these differences are small (Carli, 2017; Leaper & Smith, 2004).

The hypothesis that women use more affiliative speech, and men using more assertive speech, is supported by the research (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 more direct in communication, offer more suggestions and corrections, and interrupt more frequently. However, both women and men 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 gender that is correlated with communicatin style, but also the gender of those with whom we interact (Carli, 2017; Leaper & Ayers, 2007). For example, men demonstrate increased talking when they are with strangers or are in a group. Notably, when individuals are with people they don't know, they are more likely to use more gender stereotypical language (Leaper & Ayers, 2007). When individuals are discussing areas in which they feel they have expertise, or are in a position of having more power, they engage in more assertive communication, despite their 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 are fairly small (Carli, 2017).

In nonverbal communication, the biggest differences between men and women appears to be the frequency with which one smiles (Carli, 2017). Women have been found to smile more often than men (LaFrance, Hecht, & Paluck, 2003). The frequency with 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). However, women more frequently touch other women while communicating than men touch other men.

6.1.2. 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. *Social role theory* says that the reason there are differences in the behavior of males and females is due to roles that each have within society. Societal structure influences the behaviors of individuals. A large component of society and societal structure is work and labor. Labor division strongly dictates the behavior of men and women. The labor of women has been historically focused on domestic tasks, and labor of men has been on work 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. According to social role theorists, men were bigger and stronger, physically, and were better suited for manual labor outside the home that required strength. Women bore children who were incapable of caring for themselves, biologically priming them for stationary, domestic tasks that required nurturing. However, as society has changed, the biological basis of the establishment of some of these roles has become less relevant; in societies in which this is the case, there is less division of roles (Helgeson, 2012).

So, what does that have to do with language? Because women's roles have been focused on the home and nurturing, more communal and affiliative behaviors were fostered. Social role theory posits that the female role is primed to be agreeable, to engage in more smiling and nonverbal acknowledgement in an effort to build relationships. Adults are also more likely to command a girl to do something than a boy, fostering more agentic behavior in boys and communal behavior in girls (Whiting & Edwards, 1988). Agentic behavior in males may contribute to them using fewer attempts to foster relationships, and may partially explain their more assertive, direct communication style.

6.1.3. Gendered Language

He sat on the table – this is an example of language with gendered pronouns. There are three categories of language, as it relates to gender. There are gendered languages, natural gender languages, and genderless languages. *Gendered languages* 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, and some gendered languages have more than two genders. 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 languages are those 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 can accommodate using words that do not require a pronoun such as student, partner, and employee, and avoids gendering all together.

And finally, *genderless languages* are languages in which no nouns are categorized. Examples of these

languages include Chinese, Estonian, and Finnish.

Is communication impacted by whether or not it is gendered? Differences have been noted, but not in the way one might assume. Research indicates that language that has grammatical gender within it can shape interactions and perceptions. These perceptions may 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 might assume countries using genderless language have more equality, but this is not the case. Countries using fully gendered languages have been correlated with less equality between genders when controlling for economic factors and other confounding factors, such as religion. However, natural gender language countries show higher equality than genderless language countries. Research shows that gender neutral terms in genderless languages tend to be perceived with a male bias. Thus, genderless languages may lead to females missing opportunities to emphasize their role and visibility. Languages that allow for gender pronouns (natural gender languages) are hypothesized to promote more inclusion of women (Nissen, 2002; Braun, 2001). These languages also allow for gender-inclusive language, whereas fully gendered languages, in which nearly everything is gendered, are more difficult to incorporate neutral terms for promoting gender inclusiveness (Prewitt-Freilino, Caswell, & Laakso, 2011).

6.2. Cognition

Section Learning Objectives

- Explain how cognitive development differs between males and females.
- Clarify differences in cognitive abilities between males and females.
- Describe the perceived differences in cognitive abilities between genders.
- Define stereotype threat and clarify how it relates to gender and performance/outcomes.

6.2.1. Sex Differences in Cognitive Development

Cognitive development involves the development of one's intellectual ability to solve problems, reason, and learn. Intellectual ability is spread across several domains, including, but not limited to: memory, language, logic reasoning, math reasoning, processing speed, etc. There are various theories on cognitive development. Some hypothesize that cognitive development happens in a continuous, but gradual, way. Others propose it develops in stages. Some hypothesize that there is one single path, whereas others hypothesize that there are multiple paths. Additionally, nativists theorize that cognition is largely influenced by nature (i.e. genes, biology) whereas environmentalists hypothesize that cognition is influenced more by nurture, or the environment (i.e. parenting, schooling, religion) (Duffy, 2016).

So, do males and females develop similarly in their intellectual development? Although society perceives many differences, research shows that while there are some, there are vastly more similarities. Moreover, the differences are usually small and by adulthood, many of the them even out

(Duffy, 2017).

Let's talk about the actual sex differences. Research indicates that, in childhood and continuing into adulthood, the brain volume of males is about 10% larger than females after controlling for the larger size of males. This, however, has no impact on intelligence. When going further into detail, studies have shown that the third interstitial nuclei of the hypothalamus, responsible for sexual behavior, is larger and contains more cells in heterosexual males than females and homosexual males (Byne et al., 2001).

Another area of difference is with the amygdala. The amygdala is responsible for several functions, the most prominent being emotion regulation and processing. In males, the amygdala grows during adolescence, but not in females. This increase in size persists, 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 nucleus (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).

6.2.2. Sex Differences in Cognitive Abilities

6.2.2.1. Spatial abilities. Males are shown to perform better at mental rotation. Mental rotation tasks are those in which an individual is shown variations of stimuli that are rotated and select the appropriate response. Males tend to outperform females in mental rotation tasks, especially if timed (e.g., limited time to respond; time pressures). Differences in spatial abilities can be seen as young as 3 months old (Quinn & Liben, 2008). Research has also shown that females that have had a higher exposure to androgens perform better on these spatial tasks than females that have not. While there appears to be a biological basis for this difference, environmental factors also contribute. For example, boy toys/interests tend to focus more on visual-spatial abilities compared to girl toys/interests, and children are often shepherded into different activities based on their gender (Grose-Fifer & diFilipo, 2017).

How males and females solve problems, particularly mental rotation tasks, may differ. It appears that women tend to activate the frontal cortex area more whereas males engage in a more automatic process. As such, females approach the tasks with a more analytical approach. Males and females use different areas of the brain even when they perform similarly on a task. Therefore, even when males and females have similar abilities, the way they solve problems may be different (Grose-Fifer & diFilipo, 2017).

6.2.2.2. 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 no difference in vocabulary size 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 lessen around the age of six years old. (Grose-Fifer & diFilipo, 2017).

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).

6.2.2.3. Math abilities. Mathematics abilities do not differ between males and females on average. Despite previous theories that have attempted to explain why males may have an advantage in math and science, research fails to support this hypothesis (Spelke, 2005). Although males tend to major in mathematics/sciences in college, and pursue more math-based careers, this is not due to a genuine cognitive advantage in this skillset. It has been proposed that there may be more sociological reasons, as you will soon find out (Spelke, 2005).

6.2.3. 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 because of your gender? 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. **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 noticed 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 supported his hypothesis (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. Results indicated that if Black participants were expecting a difficult, ability/diagnostic test, they 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 began to make excuses for their performance. In general, the cumulation of findings from these 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).

Steele's research showed that it was not necessarily that African American and other minority groups had a lower, innate ability (biology), were less motivated, or that instructors were harsher toward them when grading. Rather, their knowledge about a stereotype regarding their ability and performance contributed to 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 studies to manipulate factors and the presence of stereotype threat. 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. Results of the study showed that when women experienced stereotype threat, their performance was hindered (Spencer, Steele, & Quinn, 1999).

This does not necessarily mean that someone has come to believe the stereotype that they are less capable at math or science than others. Simply being aware that *others* believe it is enough to create a stereotype threat outcome (Huguet & Regner, 2007; Wheeler & Petty, 2001).

6.2.3.1. Stereotype threat in school. As you might have gathered from the description of Spencer, Steele, and Quinn's 1999 study, girls frequently experience stereotype threats in school. At ages 7 to 8, awareness of gender stereotypes emerge. At age 5 to 7, females were unaware of gender stereotypes, but 8 to 9-year-old females were, whereas 5 to 7-year-old boys were aware of the stereotype regarding math abilities in girls (Galdi et al., 2014). Research has shown that females perform worse in math when under stereotype threat but perform equivalently to males when the threat is removed. Not only can stereotype threats reduce test performance, but they can also impact a girls' ability to incorporate and receive helpful feedback when they are worried about providing confirmation of negative stereotypes. For example, if a girl is worried about behavior or performing in such a way so as not to confirm a negative stereotype, such as girls being bad at math, when a teacher gives advice or corrections, the girl may be more reactive and consequently unable to incorporate the feedback provided. When worried about confirming negative stereotypes, individuals may also retreat, avoiding class discussions at school (Betz, et al., 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 true for many stereotype threats, not just gender related threats. Essentially, if an individual sees their gender, or another negatively stereotyped feature, as a major part of their identity, and the individual is highly focused on doing well in an area (for example, a female wanting to be an engineer), they may experience increased negative impacts from gender stereotype threats. The effect is even stronger when an individual strongly identifies with multiple groups that experience stereotype threats, for example being black, and a 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 proposed by Toni Schmader. He theorized that when one is overly worried about a stereotype threat, the worry ties up valuable cognitive resources. This worrying impacts the capacity to draw on memory and attend to the task at hand. As such, they are unable to utilize their abilities to their fullest, impacting task performance. Research has shown that stereotype threats do not just impact test performance, but also impacts learning ability. This has been especially 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 validity of the idea of stereotype threats. One argument was that most of these studies were conducted in labs and could not be generalized to the natural world. Some researchers, such as Paul Sackett, believed effects in natural settings would be small, inspiring researchers to test this in natural setting studies, such as classrooms. Naturalistic research did not support Sackett's hypothesis. Rather, it confirmed stereotype threats do negatively impact 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 performance improves. Specifically, researchers found 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. The results were significant, resulting in more than 47,000 females obtaining a 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 large 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 stereotype threats and to use self-affirming statements may also be beneficial. Additionally, simply making individuals aware of stereotype threats may be beneficial. Finally, having increased same-sex role models and higher ratios of females represented in a class may be helpful, and 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 could be reduced and lead to positive impacts. For example, as mentioned above, if there are few female classmates or teachers, increasing their number can be helpful. Also, if a pattern is present in terms of who sits where or who is called upon more frequently, it may be helpful to modify that arrangement. 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 equalize this could be 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 cognitive abilities and how perceived differences impact the development of stereotypes that then lead to stereotype threats. Finally, we outlined how impactful these threats can be and what might be done about them.

3rd edition

Module 7: Gender Through a Physiological Psychology Lens

3rd edition as of August 2023

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 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 genetic make-up, hormones, and brain anatomy are some of the factors which impact behavior. This module explores the differences and similarities between men and women through the physiological lens.

Module Outline

Module Learning Outcomes

- Describe the relationship between DNA, genes, and chromosomes.
- List and describe the most common chromosomal abnormalities.
- Explain how the endocrine system functions and clarify how the production of (or lack thereof) hormones impact ones social, cognitive, and behavioral development.
- Clarify gender differences in brain function and how this might impact differences in behavior.

7.1. Basic Building Blocks

Section Learning Objectives

- Explain how genetic information is transferred from generation to generation.
- List and describe both sex and non-sex-linked chromosomal abnormalities.

7.1.1. DNA

DNA, or deoxyribonucleic acid, is the most basic hereditary material in most organisms. Nearly every cell in your body contains some DNA which is comprised of four chemical bases: adenine (A), guanine (G), cytosine (C), and thymine (T). Each DNA base attaches to another- A with T and C with G; these attached bases form **base pairs**. Each strand of DNA contains a structural component comprised of alternating sugar and phosphate molecules. This structural component is often referred to as the "backbone" of DNA. The combination of a base pair and this structural backbone is called a **nucleotide**. The nucleotides form two long strands that twist in a ladder-like structure forming the shape of a **double helix** (National Institute of Health, 2019).

7.1.2. 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. Of all the genes contained humans, only about 1% differ between individuals, making us much more physiologically alike than different (National Institute of Health, 2019). "Mistakes" and changes sometimes occur within the large number of DNA bases in a gene. While some of these changes do not affect the individual, some can have notable consequences. We will discuss this in more detail in section 7.1.3.1.

7.1.3 Chromosomes

We've already discussed that base pairs and a sugar/phosphate backbone create nucleotides. Several nucleotides form together to create strands of 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, each cell contains 23 pairs of chromosomes for a total of 46. Twenty-two of these pairs are **autosomes**, and one pair is an **allosome**. The 22 pairs of autosomes are the same in males and females, however, the allosome chromosome, also known as the sex-chromosome, differs between males and females. This chromosome determines whether a fetus will become genetically male or female.

How does this happen? In humans, males have one X chromosome and one Y chromosome, whereas females have two X chromosomes. Some cells are produced through mitosis, but **gametes,** or sex cells, are produced through meiosis in which cells divide. This meiotic division results in gametes which contain only half the number of chromosomes as the parent (National Institute of Health, 2019). Each parent, therefore, contributes one gamete to their offspring, either an X or a Y. Since females only have two X chromosomes, they will always contribute an X to the offspring. Males, however, contain both an X and a Y, and will therefore determine the sex of the offspring by contributing either one or the other.

7.1.3.1. 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 development of fetus. These abnormalities can occur either numerically or structurally. 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, ranging from minimal developmental delays to the inability to survive.

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) 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, affecting 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). Additionally, individuals with Down syndrome are more susceptible to congenital heart defects, gastrointestinal defects, sleep apnea, and dementia, with symptoms appearing around age 50. The lifespan of individuals with Down syndrome has increased significantly, to 60 years (National Library of Medicine, 2019).

The effects of an extra chromosome range from moderate to severe. Intellectual and developmental difficulties range from mild to severe, however, research routinely supports the effectiveness of early intervention programs for reducing developmental issues. Similarly, delayed developmental milestones related to low muscle tone are common. 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 about the cause of this chromosomal abnormality, advanced maternal age of over 35 has been identified as a risk factor for having a child with Down syndrome (National Library of Medicine, 2019). A screening test can inform parents of their risk of having a child with Down syndrome, and there is no risk of miscarriage from the screening. Prenatal genetic diagnosis can alert parents to the existence of Down syndrome in a developing fetus and is 99% accurate, with only a 1% risk of miscarriage (UCSF Health, 2023).

Trisomy 18 (Edwards syndrome) 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 is associated with a high mortality rate. In fact, only 50% of babies with Trisomy 18 that are carried to term will be born alive, with girls surviving more often than boys (National Library of Medicine, 2019). Girls with Trisomy 18 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 the surviving infants 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 is a rare sex chromosome disorder in males that occurs in 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 disrupts many aspects of development, from sexual development to physical and intellectual development.

Occurring in about 1 in 650 newborn boys, Klinefelter syndrome is among the most common sex chromosome disorder. 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, 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. Receptive language skills appear to supersede expressive language skills, so individuals with Klinefelter syndrome are likely to 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. Those with Klinefelter syndrome have 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). 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).

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 the 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.

7.2. Endocrine System

Section Learning Objectives

- Identify key organs involved in the endocrine system.
- Describe the function of the endocrine system.
- Clarify why the endocrine system is important in behavior.

7.2.1. 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 the organs are important, two main organs 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 state (Johnstone et al., 2014). When the body is out of balance, it is the job of the hypothalamus to identify the need (i.e., food to increase energy, water to increase hydration, etc.), and through the pituitary gland, identify the way 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 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 to 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.

7.2.2 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 related 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 one we will focus on 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). 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.

As you will see more in other modules, particularly Module 9 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 (too much activity) has been linked to major depression, whereas *hypo*activity (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 9.

7.2.2.1. 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 woman'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 9.

7.3. Hormones

Section Learning Objectives

- Describe hormones and their role in the body.
- Differentiate estrogen and androgens.
- Define and describe intersex conditions.
- List and describe the hormone disorders.
- Clarify the effect hormones have on behavior.
- Clarify the effect hormones have on cognition.

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 serve multiple purposes.

7.3.1. 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. Males and females have *both* estrogen and androgen 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 are those an individual is born with, including sex organs needed for sexual reproduction. **Secondary sexual characteristics** are features which develop 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 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.

7.3.2. 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.

7.3.2.1. 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 resulting in impaired synthesis of cortisol and aldosterone. The consistently low levels of cortisol leads to 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 from 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 an individual's behavior. 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, increased participation in sports, and 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.

7.3.2.2. 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).

7.3.3. Effects of Hormones on Behavior

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

7.3.3.1 Estrogen. Though researchers historically neglected the roles of primary female hormones, modern research focuses on estrogens as a crucial component of the sexual desire of women (Cappelletti & Wallen, 2016). Changing levels of estrogen across the reproductive lifespan have been associated with changes in incidence of anxiety in females. 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). However, estrogen has been shown to be an emotionally protective factor, reducing fear responses. When estrogen is low, as it is during certain phases of the menstrual cycle, women are at higher risk for the development of PTSD. Men may have a lower risk for the development of PTSD, because in male brains, testosterone is converted into estrogen and remains stable rather than fluctuating monthly (Beck, 2019). Therefore, anxiety may be exacerbated by fluctuations in estrogen, rather than the presence of it. Increases in anxiety symptoms are also observed when estrogen 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 estrogen levels (Cameron, Kuttesch, McPhee, & Curtis, 1988). Therefore, there appears to be a strong link between anxiety related behaviors and estrogen levels in women. In rats, estrogen decreased anxiety and increased exploratory behavior, learning, and memory (Khaleghi et al., 2021). This has important implications for estrogen treatments for post-menopausal women experiencing decreased estrogen production (Khaleghi et al., 2021).

7.3.3.2. Testosterone. Misunderstandings about testosterone abound. One stereotype is that testosterone is related to sexual activity, but this has been shown to be false, with the exception of elderly men. As long as the testosterone levels of a male falls within a normal range, it is unrelated to sexual frequency (Gray et al., 2005). Testosterone has also been commonly associated with aggression, but just as in the case of estrogen and anxiety, care should be taken when assigning causation. Even though there is a statistical relationship between aggression and testosterone, this could mean that either testosterone increases aggression, that aggression increases testosterone, or that another factor increases them both. Popular opinion suggests that testosterone causes aggressive, violent, and other machismo behaviors, however, there is little empirical support for these assumptions (Booth, et al., 2006). In fact, the relationship between aggression and testosterone is bi-directional and depends on several individual factors, as well as the environment (Sapolsky, 1997). Testosterone does not *cause* aggression, but it can enhance it if it's already there (Sapolsky, 1997). In fact, it has been demonstrated that the presence of testosterone is not even necessary for aggression to occur (Mims, 2007).

Other factors related to testosterone include competition. 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. Furthermore, men in securely-partnered relationships, or those who are not competing, have lower testosterone levels than those who are still competing for mates. Consistently, decreased testosterone production follows reproductive success, which is not surprising, considering high levels of testosterone are detrimental for paternal care and pair-bonding (Anders et al., 2007; Puts et al., 2015). Researchers propose that situational factors, such as a threat to status or competition, interact with hormones to produce aggressive behaviors (McAndrew, 2009).

7.3.4. 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 on 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 9, this may have implications for the development of psychological symptoms after stressful situations (i.e. depression, anxiety, PTSD) as heightened sensitivity of systems to specific situations in women may be due to the "primed" opioid 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, such as cancer or pregnancy complications. 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 do not appear to impact young men (Yaffe et al., 2002; Barret-Connor et al., 1999).

Similarly in women, researchers have 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 functioning 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).

7.4. The Brain

Section Learning Objectives

- Explain what sexual dimorphism is and its importance.
- Describe gender differences in the lateralization of the brain.
- Describe gender differences in cortical thickness of the brain.
- Describe gender differences in myelination of the brain.

Another attempt to explain sex differences is through the anatomy and function of the brain. **Sexual dimorphism** refers to structural differences between the sexes. In addition to dimorphic sexual organs, different sexes have sexual dimorphism in the brain. For instance, two of the interstitial nuclei of the anterior hypothalamus are about twice as large in the brains of males than females, an area associated with sexual behavior (Allen et al., 1989). The purpose of this section is to explore these brain differences and determine how they may impact behavior.

7.4.1 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-brained," this hypothesis has been unsupported, with research showing both genders utilize the two hemispheres equally (Bishop & Wahlsten, 1997). However, as we will explain, some processes are more lateralized to particular areas of the brain than others, and they are lateralized differently in different brains.

Though both male and female brains show lateralization of function, research shows that male brains

are generally more lateralized than those of females. This means that male brains are more functionally and structurally asymmetrical (Shaywatz et al., 1995). Different degrees and locations of functional asymmetry in male and female brains could account for gender advantages in language and visuospatial skills. Males slightly outperform females in visuospatial tasks, during which, there is lateralization in the right hemisphere, whereas females show activity in both hemispheres during the task. Whereas, females slightly outperform males in language skills tasks, during which, more lateralization is seen in the female left hemisphere than in males (Tomasi & Volkow, 2012).

7.4.2 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 Resonance Imaging (MRI) studies have shown that gray matter, white matter, and brain size are smaller in women than men, even after controlling for body size, though there is no relationship between brain volume and intelligence. 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.

7.4.3 Myelination

Myelination, or the development of an insulating myelin sheath around nerves so they can transmit information quicker, 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 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 reason to believe 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 the anatomical differences between males and females, it is important to note that differences in brain structure do not necessarily translate into differential performance (DeVries & Sodersten, 2009). Men and women might use different strategies to complete the same task, activating different brain areas, with similar competence. Finally, it is important to remember that the brain is plastic, with not only brain activation influencing behavior, but behavior also influencing brain activation.

Module Recap

Module 7 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 awry, 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.

3rd edition

Part IV - Applying a Health Lens (Physical and Mental)

Part IV – Applying a Health Lens (Physical and Mental)

Module 8: Gender Through a Health Psychology Lens

3rd edition as of August 2023

Module Overview

Unequivocally, women are sicker than men. They report more pain, more mental health problems including a higher diagnostic rate of most psychological disorders (See Module 9), and report more physical symptoms. Despite this increase in overall illness, women live longer on average. In fact, men are more likely than women to die in 9 of 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

Module Learning Outcomes

- Differentiate mortality and morbidity with respect to gender.
- State the leading causes of mortality in the United States.
- Explain morbidity factors that contribute to mortality.
- Clarify gender differences among the morbidity factors.
- Clarify the implications of positive and negative health behaviors on morbidity.
- Explain the impact of environmental factors such as marriage, parenting, and bereavement on one's overall well-being.

8.1. Mortality

Section Learning Objectives

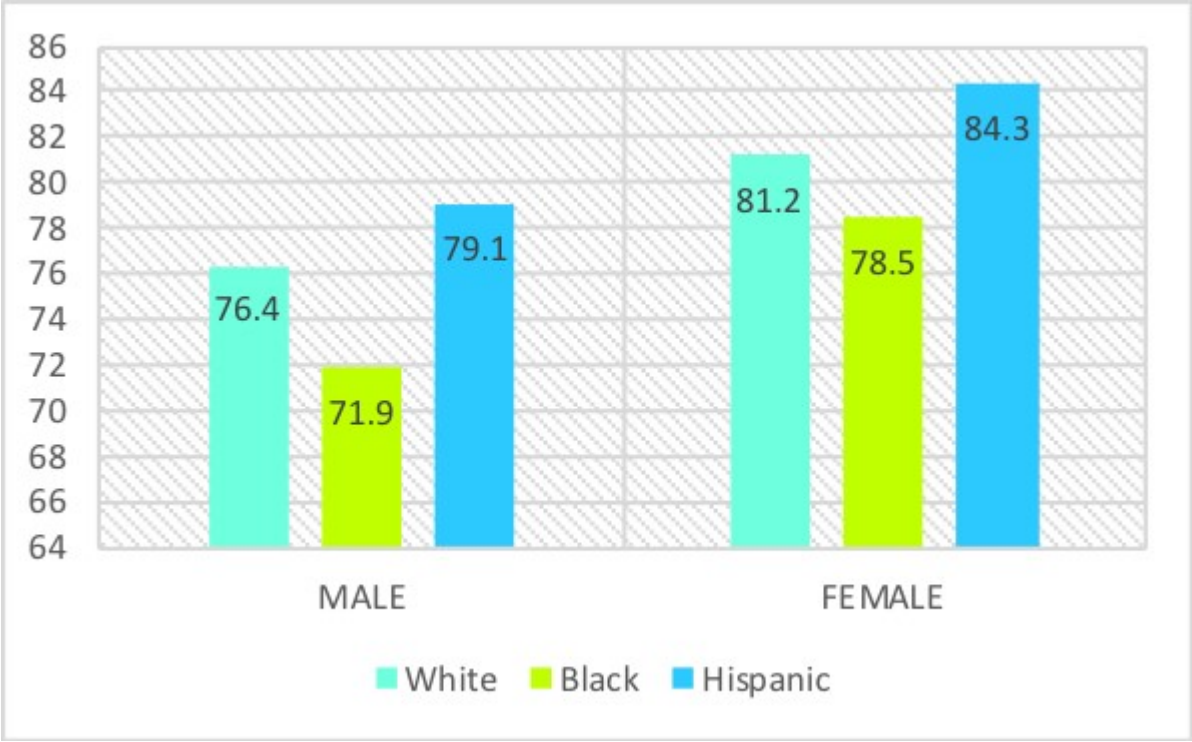
- Identify and explain factors that contribute to men and women's life expectancy.
- Clarify the leading causes of death in men and women.
- Estimate crime statistics specific to men and women.

8.1.1. Life Span/Expectancy

Boys are born slightly more often than girls, however, they have a higher death rate at every age group and ethnicity in the United States. Infant girls in the Neonatal Intensive Care Unit (NICU) outperform boys, spending less time in the NICU. While there are more boys than girls until age 18, due to their higher birth rate, girls outnumber boys for the rest of the lifespan.

According to the 2017 CDC statistics, the life expectancy at birth was 78.6 years for the total U.S. population. Men die younger than women on average, and there are differences among ethnicities. 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 8.1. Life Expectancy by Gender and Ethnicity



There has not 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 this will be addressed in detail later, between 1979 and 1986, the incidence of lung cancer in men was 7% while it rose to a surprising 44% in women (Rodin & Ickovics, 1990). These incidence rates are likely attributed to increased smoking in women, and a reduction of men smoking (Waldron, 1995).

It should be noted that there are sex differences in life expectancy globally, which are likely dependent on the development of the 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 8.1, life expectancy varies significantly among first, second, and third 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 varying life expectancies, women outlive men throughout the world.

Table 8.1 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
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/

8.1.2. Causes of Death

The leading causes of death among men and women have changed over the last century, largely due to improvements in technology 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 8.2, heart disease and cancer have claimed the first and second leading causes of death in America, a rank they have held for over a decade. In fact, together these two categories are responsible for 46% of deaths in the United States.

Table 8.2 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
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

The etiology of these diseases is 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 8.3).

Death rates among each 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. 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, For those from age 15-24, the leading cause of death is accidents for Hispanic men and women, White men and women, and Black women. The leading cause of death for Black men aged 15-24 is homicide. Interestingly, though 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).

8.1.3. 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. The majority of male homicides are drug-related (90.5%) and gang-related (94.6%), whereas female homicides are accounted for by 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 a female. In fact, the female perpetrator/female victim scenario 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 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.

8.2. Morbidity

Section Learning Objectives

- Identify factors that contribute to increased use of preventative care.
- Identify gender specific factors that contribute to the development of cardiovascular disease.
- Identify 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 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. Additionally, because women live longer, there is more time for women to be diagnosed with an illness, particularly in old age. Therefore, the 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.

8.2.1. 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. From an early age, women are more conscious of health-related behaviors such as eating habits and sugar intake, and actively seek out health-related information more often than men (Bärebring et al., 2020). 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 contributing factor to the increased preventative care in women may be reproductive issues. Women are encouraged to have yearly examinations which may include pap smears, breast exams/mammograms, and birth control evaluation. Women also have more medical appointments during and immediately following pregnancy, as well as older adults during menopause. Additionally, women may eat healthier and seek health information stemming from "body-shape concerns and diet-related anxiety" (Bärebring et al., 2020). Because men do not require similar medical care throughout their life and share the same concerns, they may not be as shepherded toward healthy behaviors.

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 usually has a better prognosis. This may also explain why women tend to have a higher diagnostic rate of health disorders, yet a lower rate of mortality.

8.2.2. 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**, when a blood vessel bursts within the brain, 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 issues, the most prominent being the location in the brain where the vessel is blocked or bursts. For example, if the stroke occurs in the left hemisphere, it could cause right side paralysis, speech/language problems, slow physical movement, and/or memory loss. A right hemisphere 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 an 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.

8.2.2.1. 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 for 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 whom 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 for 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 a stroke. Women also appear to have poorer functional outcomes after a stroke 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% for men; 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 at a later age 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 a younger age than women with the average age of the first heart attack for men being 65.6 years and for women being 72.0 years (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 for 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 no women in their sample of 12,866 individuals. 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.

8.2.3. 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 beyond the scope of this book, 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, in 2019, incidence rates were highest among the following forms of cancer (top 5 presented): Breast (271,270), Lung and bronchus (228,150), Prostate (174,650), Colorectum (145,600), and Melanoma of the skin (96,480). Interestingly, deaths were highest for: 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 lower death rate compared to incidence rate 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 most cancer causing death in men.

8.2.3.1. Risk factors. Given the large number of cancer diagnoses and deaths every year, it is important that individuals identify risk factors in an effort to reduce the likelihood of developing cancer throughout their lifespan. Many of the behaviors we discuss in section 8.3 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 U.S. 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 are 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, or 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).

8.3. Health Behaviors

Section Learning Objectives

- Explain how exercise may have a positive effect on an individual's health.
- Clarify how obesity negatively impacts one's overall health and contributes to an increased morbidity rate.
- Clarify how alcohol negatively impacts one's overall health and contributes to an increased morbidity rate.
- Clarify how tobacco negatively impacts one's overall health and contributes to an increased morbidity rate.
- Clarify 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 the factors that contribute to an increased morbidity rate. Additionally, we will discuss the gender discrepancies observed among these contributing factors.

8.3.1. Exercise

Our first factor, exercise, is a positive health behavior that has been 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 in 2019 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 at 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).

8.3.1.1. Effects of exercise. Several longitudinal studies have examined the relationship between physical activity and disease incidence. Findings suggest strong evidence for a relationship between moderate-to-vigorous physical activity and cardiovascular disease mortality. The risk of a cardiovascular event decreased with increased physical activity up to at least three to five times per week. Sattelmair and colleagues (2011) also 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 are 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 is 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 and gastric (Liu et al., 2016), pancreatic (Farris et al., 2015) and lung cancer (Moore et al., 2016). While most studies demonstrated 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.

8.3.2. 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 identify 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 8.3). 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 identifying obesity in the U.S.

Table 8.3 NIH BMI Categories

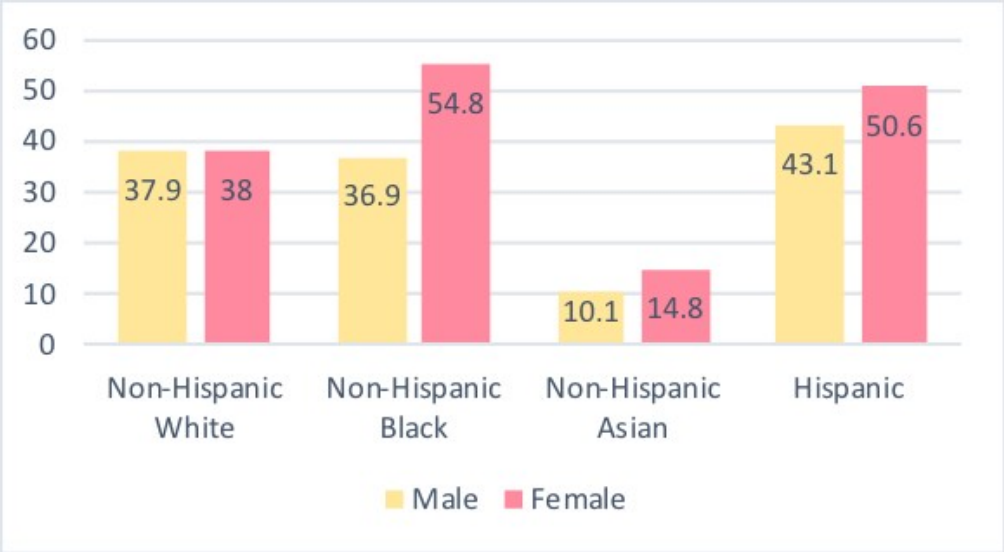
Underweight	< 18.5
Normal	18.5-24.9
Overweight	25-29.9
Obese	>30

It is also important to note that obesity often looks different in men and women. **Android obesity**, also 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 also described as "pear" shape. These individuals tend to have more weight in their hip region, thus the description of a pear. Those 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).

8.3.2.1. Prevalence rates. According to the CDC, the prevalence of obesity among U.S. 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 8.2 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 8.2 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).

8.3.2.2. 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 increased fatty deposits built 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, over time, 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, 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 cultures 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 (Janssen et al., 2004; Strauss & Pollack, 2003; Faulkner et al., 2001).

8.3.3. Alcohol

Alcohol, unlike other substances, is related to 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.

8.3.3.1. 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 than 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 heavy 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).

8.3.3.2. Gender differences. While some attribute the gender difference in alcohol consumption to societal attitudes being more accepting of men consuming 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 ability 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).

8.3.3.3. Effects of alcohol. Alcohol consumption in excess (i.e. binge drinking) can have immediate health risks such as increased likelihood of injuries from accidents to include 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 increased 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).

Alchohol comsumption has also been linked with higher risk of colon and rectal cancer. Although the relationship between alcohol consumption and colon/rectal cancer is stronger in men, an increased risk is found in both men and women. Finally, breast cancer is related 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. As mentioned above, minimal alcohol use may actually reduce the risk of stroke, however, this appears to be more protective for men than women. The risk of having a stroke increases 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).

8.3.4. 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.

8.3.4.1. 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 in taxation on cigarettes as well as the increased health warnings of the effects of smoking.

It is also important to mention child 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).

8.3.4.2. Effects of tobacco. It is 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 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 (U.S. 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 (U.S. Department of Health and Human Services). These statistics are even higher for individuals who have a diagnosis of asthma as 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 damage 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.

8.3.4.3. Vaping. A more recent trend is vaping (also called e-cigarettes or e-cigs, e-hookahs, and vape pens) and are battery powered devices that are used to heat liquid into a vapor that can be inhaled. They look like traditional cigarettes, cigars, or pipes, or even every-day objects such as pens or memory sticks. The devices contain nicotine which makes it difficult for people who vape to quit. They may also include flavorings and other toxins, including ones which cause cancer.

The National Institutes of Health (NIH) reported in 2017 that 20% of 12th graders self-reported vaping nicotine. The NIH writes, "Youth who use nicotine are at risk of long-term health effects. Nicotine affects the development of the brain's reward system and brain circuits that control attention and

learning. Continued use of nicotine can lead to addiction and raise the risk for addiction to other drugs." Section 8.3.5 talks about drugs but before we get there, and related to the topic of vaping, it should be noted that since 2018-2019, marijuana vaping has increased among teens with about 20% of high school seniors reporting vaping marijuana in the past year.

Research shows that vaping may be less harmful than traditional cigarettes (Drummond & Upson, 2014; see Table 2 for comparison of toxin levels in conventional and electronic cigarettes) when frequent smokers switch to them completely. Still, Dr. Thomas Eissenberg, an expert on tobacco research at Virginia Commonwealth University, writes, "Your lungs aren't meant to deal with the constant challenge of non-air that people are putting into them—sometimes as many as 200 puffs a day—day after day, week after week, year after year." "You're inhaling propylene glycol, vegetable glycerin, flavorants that were meant to be eaten but not inhaled, and nicotine," he explains. "And all of those are heated up in this little reactor, which is an e-cigarette. When they get heated up, those components can turn into other potentially dangerous chemicals" (Eissenberg et al., 2020). NIH goes on to add that one such harmful chemical may be a thickening agent called Vitamin E acetate which is sometimes used as an additive in THC-containing vape products and the CDC recommends avoiding any vaping product containing it. Eltorai, Choi, and Eltorai (2019) state that e-cigs/vaping appear harmful to multiple organ systems such as the pulmonary, cardiovascular, and immune systems where acute effects have been noted, although the current body of evidence is limited and there is little to no research on the long-term effects.

So why vape? Though males are more likely to vape than females (Lee & Oh, 2019), little is known about why this is so. In a study of 3,938 current e-cig users from Canada, the United States, England, and Australia (54% male), Yimsaard et al. (2020) found that the most commonly cited reason for vaping in females was "less harmful to others" (85.8%) which may reflect female users concerns about the adverse effects of secondhand smoke on others while males cited "less harmful than cigarettes" (85.5%). Significant gender differences were found in the type of product used with females being less likely to report using e-liquids containing >20 mg/mL of nicotine, and tank devices with >2 mL capacity than males. There were no significant gender differences in the use of flavored e-liquids though fruit was the common flavor for both genders (54.5% for males and 50.2% for females). The authors suggest continued monitoring of the reasons for vaping and product used so that it might inform outreach activities and interventions for e-cig use.

Many people hold the belief that e-cigarettes can help them quite smoking tobacco but are these claims supported by research? One such study showed that e-cigarette use could lead to decreased daily conventional cigarette use but this was a small sample size of just 40 participants at Time 1, no control group, 27 participants at a six-month follow up, and 23 at a two-year follow up; Polosa et al., 2014; Polosa et al., 2011). Caponnetto et al. (2013) found that e-cigarettes with or without nicotine, could be used to decrease cigarette consumption and elicit enduring tobacco abstinence with no significant side effects in smokers not intending to quit (sample size of 300 smokers – 190 men and 110 women with a mean age of 44.0 (+/-12.5 years)). They write, "It is possible that for some participants, satisfaction from e-cigarette use was good enough to compensate for their need of own brand cigarette. Indeed, the replacement of the ritual of smoking gestures and cigarette handling, the opportunity to use the product in public places and to reduce bad smell, as well as the perception of an improved general sense of wellbeing might have been the cause for the substantial success rates of the ECLAT (**E**ffi**C**acy and safety of an e**L**ectronic cig**A**re**T**te) study." Finally, another study of 657 participants (405 women and 252 men) found that e-cigarettes, with or without nicotine, were modestly effective at helping smokers to quit and produced few adverse events and had a similar rate of success compared to

nicotine patches (Bullen et al., 2013).

8.3.5. 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 primary drug used in these overdose deaths (National Institute of Drug Abuse, 2019).

8.3.5.1. Illicit drug gender discrepancies. 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 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, 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 to this increase of fluid between cells as almost all of the reported cases of death from this biological change are 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 & Strang, 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).

8.3.5.2. 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 1 in 10 HIV diagnoses occur among people who inject drugs (Centers for Disease Control and Prevention, 2017a). A recent study from the CDC 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).

8.4. Environmental Factors and Physical Health

Section Learning Objectives

- Clarify what the impact of marriage is on one's physical and mental well-being.
- Explain how parenthood might affect one's mental health.
- Identify moderators that account for the variability of mental health issues in parenthood.
- Describe gender differences in the relationship between bereavement and physical and mental health.

We have discussed behavioral factors that contribute to one's physical well-being, but what about environmental factors? We know that stress in the environment can lead to an increased likelihood of engaging in negative behaviors such as poor nutrition, increased 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.

8.4.1. 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 an effort to identify specific factors that contribute to the benefits of marriage, researchers examined health disparities among married, unmarried, and unmarried but cohabitating individuals. Overall, research has 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 the highest levels of happiness, whereas same-sex single individuals were the least happy.

8.4.1.1 Dissolution of marriage. 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 state that the dissolution of marriage impacts men and women differently, most noticeably by changes in roles within the household. Women tend to make a greater economical shift post-divorce, reporting 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 greater strain in social support compared to women. 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.

8.4.1.2. Quality of marital relationship. It is important that we also assess the impact of the quality of a marital relationship as we 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 as to 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.

8.4.1.3. 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. Regarding 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 shows 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.

8.4.2. 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 are not having as many children as they have in the past. Not only has the number of women choosing not to have children increased over the past decade, but the number of children born to each woman has decreased to an average of 1.9. 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.

8.4.2.1. Effects of parenthood on health. The research on the effects of parenthood on mental and physical health are 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 elevated rates of depression in mothers, but not fathers, and that single mothers may be the most at risk (Targosz et al., 2003; Bebbington et al., 1998). 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 due to being a parent, or is it related to being a *single* parent, and the financial stress of being single and without social support? This 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 is determined by several moderating variables.

8.4.3. 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.

8.4.3.1. Factors affecting 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. There could be varying degrees of coping impacting the health of an individual.

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 one might imagine, this is not the best use of resources, as the sample size would have to be very large. Additionally, one might have to collect data on individuals for many years, as it is challenging to predict when a life will 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 this would present other confounding factors.

Module Recap

There are many factors that contribute to one's health. We discussed a 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 leading causes of death in the United States: 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 and how the implications of these factors are different for men and women.

3rd edition

Module 9: Gender Through a Clinical Psychology Lens

3rd edition as of August 2023

Module Overview

If you have taken abnormal psychology before, you know there are discrepancies in the diagnostic rate of mental health disorders for 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 mental disorders and discuss possible explanations for why these differences occur.

Module Outline

Module Learning Outcomes

- Clarify how methodological artifact contributes to the gender bias in diagnosis of mental health disorders.
- State the gender discrepancies in rate of diagnosis for Major Depression Disorder, Anxiety Related Disorders, PTSD, and eating disorders.
- Outline various cognitive, social, and biological variables that contribute to the gender differences in selected mental health disorders.
- Describe the gender paradox of suicide.
- Identify variables that contribute to gender differences in seeking mental health treatment.

9.1. Methodological Artifact

Section Learning Objectives

- Explain how methodological artifacts contribute to gender bias in clinical psychology.
- Identify the types of clinician bias and how they impact diagnosis rate of mental health disorders.
- Clarify how response bias can impact diagnosis rate of mental health disorders.

Disparities in prevalence of clinical disorders between genders could be caused by factors other than gender itself. For instance, the findings of a study could be caused by a **methodological artifact**, which is when a research outcomes is due to the research technique or method used and do not reflect real-world data. Clinician bias and response bias are two ways in which methodological artifacts can occur. Additionally, the manifestation of symptoms is different among men and women, and instruments, such as questionnaires, can be biased to these symptoms.

9.1.1. Clinician Bias

Most people have accidentally misjudged someone at some time or another, only later to find out that their initial assessment was incorrect, and clinicians are no exception. 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 subjective bias can occur, 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. **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 can also lead to inaccurate diagnoses, as clinicians may have the tendency to recall only 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, altering the true presentation of symptoms (Garb, 1998).

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

9.1.2. Response Bias

Patient response bias is another type of bias which can lead to misdiagnosis. A patient is responsible for providing information about themselves, including presenting symptoms. Unfortunately, some patients tend to respond inaccurately or falsely to questions. While some of these errors may be unconscious, others may be intentional.

Studies have indicated that there are sex differences in attitudes toward various disorders, such as depression. Individuals tend to classify depression as a “feminine” diagnosis, and thus, may lead male

patients to underreport symptoms (Page & Bennesch, 1993). This also extends beyond depression, as studies have shown both males and female clinicians 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 being stigmatized.

9.2. Clinical Disorders

Section Learning Objectives

- State the prevalence rates of Major Depression Disorder in the United States.
- Outline variables that contribute to the gender differences in Major Depression Disorder.
- State the prevalence rates of anxiety disorders in the United States.
- Outline variables that contribute to the gender differences in anxiety disorders.
- State the prevalence rates of PTSD in the United States.
- Outline variables that contribute to the gender differences in PTSD.
- State the prevalence rates of eating disorders in the United States.
- Outline variables that 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 book. However, if you are interested to learn more about the prevalence rate of mental health disorders we invite you to read Fundamentals of Psychological Disorders by Alexis Bridley and Lee Daffin.

9.2.1. 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 on 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 other research that indicates 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 complicates treatment for depression, but also willingness to seek mental health treatment in general.

9.2.1.1. 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, 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 not in boys.

Another cognitive vulnerability that is linked 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).

9.2.1.2. Stress and coping. In addition to cognitive vulnerabilities, stress and coping of various life events also contributes to the development of MDD. Observed 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 (Hammen, 2009; Seiffge-Krene, Aunola, & Nurmi, 2009; Hankin, Mermelstein, & Roesch, 2007). These findings are consistent in both the home and social settings. More specifically, girls who experience family discord report more symptoms of depression than boys and are at an increased risk for a depression diagnosis (Essex, Klein, Cho, & Kraemer, 2003; Crawford, Cohen, Midlarsky, & Brook, 2001). As stated above, girls also experience more stressful situations with peer relationships which has also been linked to increased depressive symptoms.

Stress can also be caused by social factors, such as gender roles, societal expectations, power imbalances, and gender discrimination. From an early age, girls are often socialized to prioritize the needs of others, develop strong interpersonal relationships, and suppress their own desires and emotions. This emphasis on self-sacrifice and emotional repression can increase the risk of depression later in life. Additionally, women face various forms of discrimination and unequal treatment, such as pay disparities, limited career opportunities, and gender-based violence, which can lead to chronic stress, feelings of powerlessness, and reduced self-esteem, which are risk factors for depression (Piccinelli & Wilkinson, 2000).

9.2.1.3. Biological variables. We already discussed the role of sex hormones in the development of various behaviors in Module 7, 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 (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 (Mendle, Harden, Brooks-Gunn, & Graber, 2010; DeRose, Wright & Brooks-Gunn, 2006; Graber, Seely, Brooks-Gunn, & Lewinsohn, 2004; Crick & Zahn-Waxler, 2003).

One possible explanation for the relationship between early onset puberty and increased risk of 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).

Finally, differences in the HPA axis could be a contributing factor to the disparity in depression rates between men and women. As previously discussed in Module 7, 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, making women more vulnerable to depression, particularly after stressful situations. The role of the HPA axis in combination with coping style may predispose women to a susceptibility of depression.

9.2.2. 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 (McLean, Asnaani, Litz, & Hofmann, 2011; Gum, King-Kallimanis & Kohn, 2009; Bekker & van Mens-Verhulst, 2007). However, the sex differences are less pronounced, and sometimes not statistically significant, for social anxiety disorder and obsessive-compulsive disorder (McLean & Anderson, 2009; Bekker & van Mens-Verhulst, 2007). 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 workdays 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, 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).

9.2.2.1. 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 differences in fear conditioning, researchers have suggested that there may be a gender difference in fear extinction, 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, affect 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.

9.2.2.2. Gender roles. One must also explore the impact of gender roles in the development of anxiety related symptoms. Cultural norms which emphasize women's roles as caregivers and nurturers may lead to increased anxiety due to additional responsibilities and societal pressures (Parker & Brotchie, 2010). Furthermore, as mentioned before, women are more likely to experience gender-based discrimination, harassment, violence, trauma such as sexual and domestic abuse, all of which can lead to chronic stress and anxiety (Dworkin et al., 2017). Researchers examined anxiety differences between men and women while controlling for environmental stress and social desirability, reporting that gender socialization influences the prevalence of anxiety in women (Zalta & Chambless, 2012).

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, but not females, when examined for 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 suggest 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).

9.2.3. 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, what we know suggests 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 difference in 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). Sexual assaults were shown to be endemic and pervasive in a survey of 900 women, where one in four women had been raped, and one in three, sexually abused in childhood (Russell, 1984). Women are also more likely to report PTSD symptoms to other types of traumas. 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). However, research shows that men underreport symptoms of PTSD, due to societal expectations of masculinity, with an emphasis on self-reliance, emotional restraint, and toughness (Vogel et al., 2011). The pressure to conform to such expectations can lead to the downplaying or suppression of PTSD symptoms, making it less likely for them to seek help or disclose their experiences. This could result in research outcomes due to methodological artifact.

9.2.3.1. 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 for the stressor, and then return to baseline once the threat is over. As we discussed in Module 7, 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 influenced by 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 female 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).

Research indicates production of estrogen may account for the gender differences in basal cortisol and glucocorticoid negative feedback, which may also explain why girls initially have higher rates of cortisol, but lower levels as adults. Through animal models, researchers have found 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.

9.2.3.2. 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).

9.2.4. 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 not engaging 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, and of the three eating disorders, individuals diagnosed with anorexia nervosa having the highest mortality rate. Males may be at an increased risk of 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).

9.2.4.1 Societal variables. The most prominent theory behind the development of eating disorders may be 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 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 increased 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.

9.2.4.2 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, whereas 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 have more impact on disordered eating habits than fathers. More specifically, direct negative maternal comments about weight and appearance may be a more powerful influence 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 have also 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.

9.2.4.3 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 the research with regards to individual characteristics uses entirely female samples. Therefore, it is difficult to determine whether 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. 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.

9.3. Suicide

Section Learning Objectives

- Describe suicide rates in the United States.
- Describe the gender paradox in suicide.
- Outline 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 is dedicated to decreasing suicide rates by 2030, it has steadily increased over the past few years and across all age groups (Office of Disease Prevention 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 an 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.

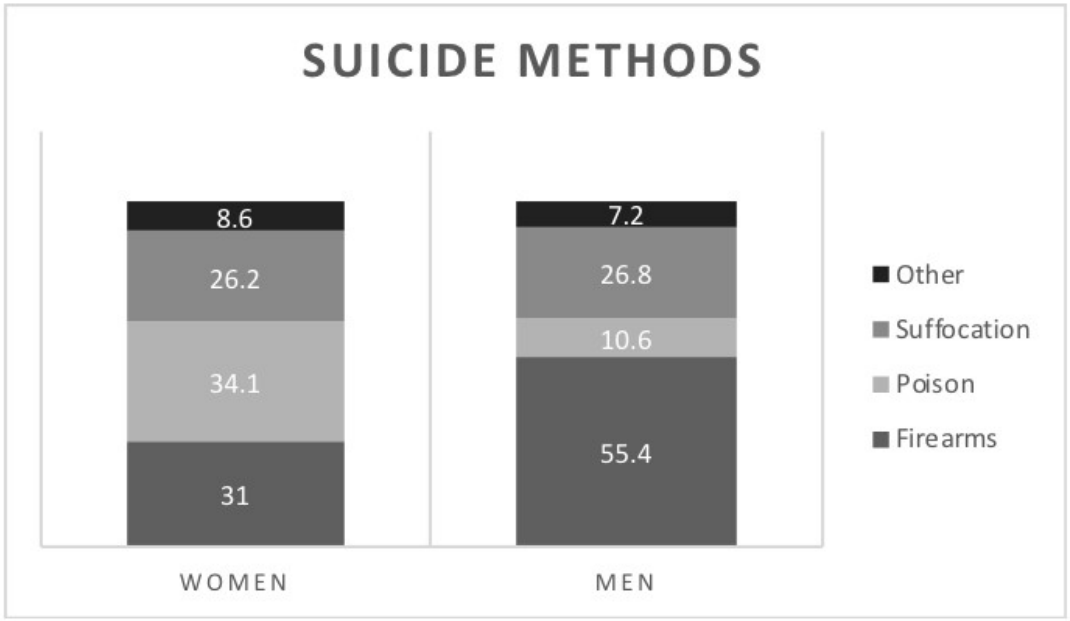
9.3.1. Gender Paradox

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, where more attempts but no completions could indicate the intent of the attempt of suicide may 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 to die 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 use more severe methods such as guns and hanging, whereas women are more likely to

use drugs, over the counter and prescription, as well as carbon monoxide (see Table 10.1; Denning, Conwell, King, & Cox, 2010).

Table 9.1. Suicide Methods



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 more ambiguous methods, medications and poison, the actual rate of women's suicides may be underreported as some deaths may be ruled "accidental," another possible methodological artifact.

Cultural attitudes regarding masculinity and suicide have 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 *completion* itself is considered a more masculine behavior; however, suicide *attempts* are considered a more feminine behavior. Therefore, there may be an underrepresentation of the number of suicide attempts/nonfatal behaviors in men due to the social stigma attached to nonfatal suicide behaviors.

9.3.2. 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 suicide. More specifically, depression could lead to suicidal behavior, however, a failed suicide attempt could also lead to depression. When exploring the relationship between depression and suicide 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 men

avoiding seeking help for mental illness more than women. This is supported by studies that found men who kill themselves are less likely than women who kill themselves 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 kill themselves 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 important 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). Being married and receiving social support may be a protective factor against suicide for women. It has been further discussed that from a gender role perspective, women are also expected to provide social support to 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 historically 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 minorities reporting increased suicidal ideation and attempts than heterosexuals (Payne et al., 2008). While female sexual minorities are at an increased risk for suicidal behaviors, non-heterosexual males are at an increased risk as well.

9.4. Gender and Mental Health Treatment

Section Learning Objectives

- Outline factors that contribute to the gender discrepancy in seeking out mental health treatment.
- Compare and contrast how the male gender role and female gender role may impact men and women's utilization of services.
- Describe feminist psychotherapy to include its goal, tenets, and criticisms of.

According to recent studies, only one-third of individuals who meet diagnostic criteria for a mental health disorder 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 is consistent with the trend that women 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. 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). Although women are more likely to seek out treatment, men appear to benefit more from the intervention (Hauenstein et al., 2006).

In an attempt 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 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.

9.4.1 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 reporting negative views of psychological help-seeking (Wisch, Mahalik, Hayes, & Nutt, 1995).

Gonzalez and colleagues (2005) examined 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 explored 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 men are conditioned to appear more self-reliant, and therefore, are less likely to seek assistance when needed. Men who report more traditional sex role orientation and independence have more negative attitudes toward seeking mental health treatment (Ortega & Alegria, 2002).

9.4.2. 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 a scientific rationale for women's secondary social status. In an effort 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 tenets 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 (Walker, 1978). One way therapists do this is by addressing gender issues as they can cause psychological distress and shape one's behavior. Everyone is 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 an attempt to help improve the patient's overall mental health.

Module Recap

In Module 9, we discussed the methodological artifacts from both clinician and reporting biases that may contribute to the gender differences among prevalence rates of 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 attempt suicide. 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.

3rd edition

V

Part V - Final Topics - Section Title Page

Part V – Final Topics

Module 10: Gender Through an Educational Lens

3rd edition as of August 2023

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

Module Learning Outcomes

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

10.1. Preschool

Section Learning Objectives

- Define self-competence and self-esteem clarify how they impact school experiences and differ between boys and girls.
- Clarify the role play has in preschooler's development and how play varies between genders.

10.1.1. Self-Competence

A child's ability to self-regulate, or manage their behavior following experiences of stress, excitement, or arousal, can lead to better social competence. **Social competence** is the ability to interpret and evaluate social situations and make decisions about acceptable ways to respond. High social competence leads to higher self-esteem and **self-concept**, the ability to cope with correction and failure. A high self-concept leads to higher social school readiness, or higher cooperation with peers, positive views about school, fostered ability to listen and focus (Joy, 2016).

10.1.1.1. 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 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 (Marsh & Ayotte, 2003; Young & Mroczek, 2003; Cole et al., 2001); however, people on average assume that boys have higher self-esteem, and it may be that girls internalize this assumption. Thus, some studies show that girls have lower self-esteem (Hagbor, 1993).

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 (Donellan et al., 2005; Kernis, 2002).

The *model-observer similarity hypothesis* posits that when learners perceive themselves to be similar to the model, or the teacher, then they will show greater self-efficacy. However, there is mixed support for this, and which is largely explained by *what* is being learned. 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. Task appropriateness (male versus female tasks), is learned best by same-sex models. Students perceived same-gender models as more similar to them than other-gender models. Same-sex models may also increase perceived confidence, but do not necessarily improve performance, increase confidence, or increase self-efficacy (Hoogerheid, van Wermeskerken, Van Nassau, & Van Gog, 2018).

As children get older, self-competence declines. The rate at which it declines depends on the subject area. For example, self-competence 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).

10.1.2. 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. 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 and what is acceptable and preferred by peers. Sex-role socialization theory states that society shepherds children into different roles to fulfill differentiated roles in adult life, paid labor outside the home for men, and unpaid housework labor and child rearing for women. The theory proposes two opposite 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. 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 paid labor.

Interestingly, before the age of 2, it is difficult for children to distinguish between boys and girls. Children show a preference for sex-typed toys that match their sex, for example, dolls or cars, between 12 and 18 months (Serbin et al., 2001). However, at this age, children are not able to match the sex-typed toys with male or female faces and voices, indicating they have not yet been socialized into thinking of toys as either "female" or "male." Even less influenced by human socialization are nonhuman primates, who also show preferences for sex-typed toys. Female monkeys preferred playing with soft toys and dolls, and male monkeys preferred playing with balls and toys with wheels (Alexander & Hines, 2002). By age 5, children will not only prefer to play with their own gender, but they will also likely reject or show a bias against the other gender (Martin & Beese, 2017; Hill & Portrie-Bethke, 2017; Hill & Haley, 2017).

It has been suggested that in order to reduce the effects of socialization on gender and create gender-equal environments, teachers can provide models and examples of non-sexist behavior. Moreover, they can encourage gender equality by choosing gender neutral language, for example, firefighter rather than fireman. Teachers could also provide encouraging environments for children who deviate from typical gendered play norms, such as boys playing with dolls and use visual materials that are gender neutral or show both genders performing a task. 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*. This theory suggests 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 proposes that, because of this, there is an emotional investment in gender roles and encouraging nonsexist behavior is not appropriate. It is suggested that doing this requires an individual to give up something they perceive as desired and pleasurable. For example, if a girl is encouraged to play with trucks instead of dolls, but they find pleasure in playing with dolls, she has been asked to give up a toy she truly likes and enjoys (Martin & Beese, 2017).

Twenty-five percent of girls reported feeling teased by boys, usually in ways such as boys pushing them too hard on a swing, hitting them, etc. This could lead to a preference in some girls 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).

10.2. School

Section Learning Objectives

- Describe math abilities in girls.

- Describe academic achievement in boys.
- Describe the various components of school culture that contribute to boys' and girls' experiences at school.
- Clarify 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 clarify how it occurs in the school-setting.

10.2.1. Math Ability in Girls

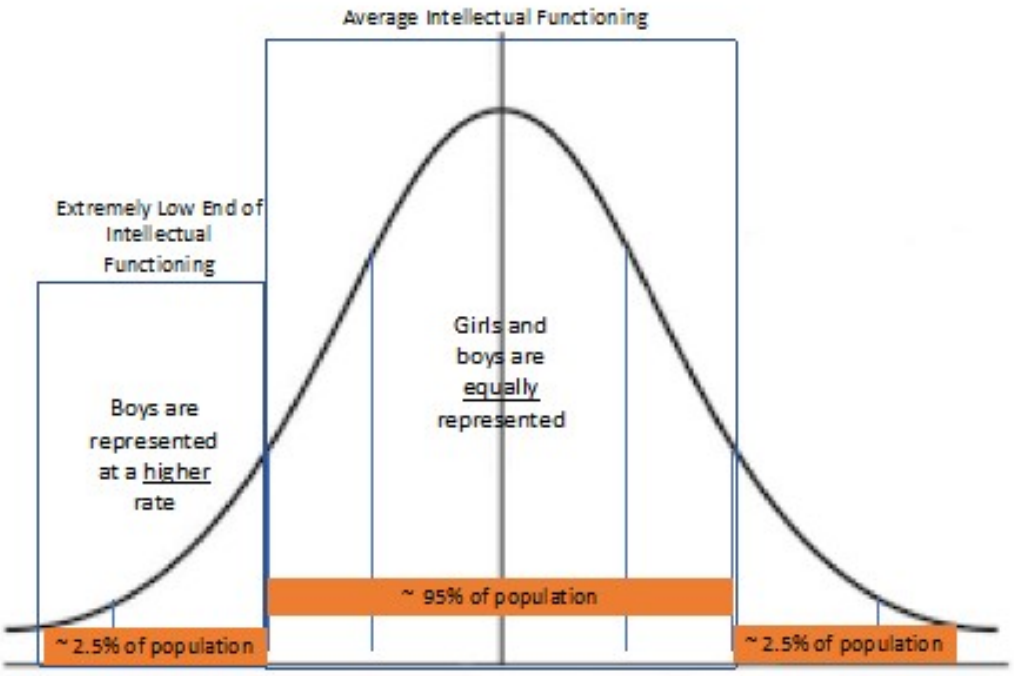
As you know by now from our discussion in the cognitive chapter, there are minimal differences in actual cognitive capacities between genders, and math is no exception. However, girls are often perceived to have lower math abilities by adults (e.g., parents and teachers; Tomasetto, Alparone, & Cadinu, 2011; Beilock, Gunderson, Ramirez, & Levine, 2010), peers, and themselves (Correll, 2001). As we discussed with stereotype threat and self-fulfilling prophecies, this perception may lend itself to girls performing lower in math. It is not that girls have genuinely 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. Rates of females pursuing STEM-related fields increased. In fact, there appears to be equivalent numbers of males and females seeking STEM-related courses in grade school and even in college. However, this does not necessarily carry into careers, as men are more likely to earn a degree in a STEM-major and securing STEM-related careers (Martin & Beese, 2017).

10.2.2. Boy's Achievement

Although boys get more attention from their teachers, they tend to underachieve compared to girls, and they are falling further and further behind in school performance (Kafer, 2007). Girls are more engaged in school on average, perform higher in academics, are more likely to go to college, and are more likely to complete their college degree, compared to boys. Boys, on average, experience more academic struggles and are referred for behavioral problems more often 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. While there are some proposed explanations for this, more research is needed (Kafer, 2007).

Figure 10.1. Extreme Scores in Males



One proposed explanation is a difference in intelligence, however, 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 Figure 10.1).When we examine the extreme lower end of the curve (left of middle; see Figure 10.1), 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). 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 increasing male teachers (see the model-observer similarity hypothesis in Section 10.1.1.1; Skelton, 2006). However, as previously mentioned, boys already receive more attention than girls in school.

10.2.3. School Culture

The culture created at school and in a classroom is incredibly important for youth outcomes. Much of culture comes from social norms and expectations. For example, girls are expected to be quiet and prosocial. They receive a great deal 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 exhibit 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? When students do not conform to gender norms or identify as

heterosexual, despite increasing acceptance and tolerance, there still remains a high level of hostility. These students often experience sexual harassment and discrimination. These experiences at school, due to the culture that persists, may lead to these students avoiding school and under-engaging, leading to poorer outcomes academically. Increased emotional distress has also been observed. (Martin & Beeese, 2017).

10.2.4. "Cool" Masculinity

Masculinity, particularly as an adolescent, is highly valued in our society. To be perceived as masculine, boys must avoid looking weak, 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 stereotypically masculine areas, sports for example, boys may not receive social encouragement when they deviate from traditional masculine roles and characteristics. In fact, they are often shamed.

Interestingly, when males are encouraged to restrict their emotions and appear tough, aggression toward themselves and others may also be encouraged (Feder, Levant, & Dean 2007). Aggression is often encouraged in males. Soldiers and first responders, who are usually men, are celebrated for restricting emotions to appear brave and courageous. Aggression in males is also modeled on television. Miedzian (2002) defines this focus of aggression in males the *masculine mystique*. Boys with higher socioeconomic status (SES) and more resources may find appropriate ways to manage negative emotions, whereas boys with lower SES may struggle to find similar coping methods, resulting in more aggression and criminal behavior.

10.2.5. Gender Tracking

Gender tracking is when students are channeled into different areas of focus/paths solely based on gender. Although this can happen overtly, it may more commonly happen covertly. How children are gender tracked may vary based on age. For example, we begin gender tracking children as soon as we know the sex of a baby – choosing toys, clothes, names, and décor that are specific to their gender. In elementary school, and teachers continue to track girls and boys into playing with gender-typical toys. These are more overt channels. Cover tracking could include teachers calling on boys and attending to them more often than girls, leading girls to raise 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. Boys are often tracked into stereotypically masculine trades (mechanical and masonry tasks), whereas girls are tracked into stereotypically feminine trades (e.g., food trades, child care, and cosmetology). One concern is that feminine trades often have lower incoming potential

(Jones, 2017).

High achieving youth are also tracked. Males tend to be tracked into STEM-related classes, whereas higher achieving females tend to be tracked into humanities, social sciences, etc. The only areas that seem immune to gender tracking is history and biology, with both males and females equally represented (Jones, 2017).

10.3. School Performance

Section Learning Objectives

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

10.3.1. 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 educational experiences of students. This bias occurs when teachers form expectations for how a student will perform based on factors unrelated to their prior academic performance. Those factors may include the child's gender, racial or ethnic identity, or their social/financial status. Sometimes these biases are unconscious, and teachers are unaware of them. The beliefs people have that they are not aware of are referred to as implicit beliefs; (Casad & Bryant, 2017).

Robert Rosenthal, one of the first researchers to examine teacher bias, described the "Pygmalion effect", or when teacher's expectancies were shown to impact IQ scores (keep in mind, IQ is not a construct which should be impacted in this way). Moreover, the younger a student was, the more likely their score was to be impacted (Casad & Bryant, 2017; Rosenthal & Jacobson, 1968). Ultimately, if a teacher expects a student to underperform and treats them accordingly, the student will be less likely to persevere and try harder in a challenge, which will result in a lower performance on the task (Casad & Bryant, 2017). In this way, the expectations of teachers can lead to self-fulfilling prophecies in students and may contribute to achievement gaps (Robisnon-Cimpian et al., 2014). How teachers communicate to boys and girls, particularly if they foster expectations that boys will be better in math and girls better in language, may contribute to self-fulfilling prophecies that are reflected in gender gaps in math and language (Robinson-Cimpian, et al., 2014).

10.3.2. Single-Sex Schooling

Single-gender or single-sex schooling is a controversial topic. While some are proponents of this option, others strongly discourage it. To understand the controversy, let's consider each side and the reasons for their positions. Then we will discuss what the research supports.

10.3.2.1. In favor of single-sex schooling. Proponents 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 account for this and tailor education specific to a child's potential learning/cognitive strengths and weakness based on their sex. Proponents of single-sex schooling argue that the nature of single-sex classes would eliminate gender biases and discrimination, particularly for girls (Halpern et al., 2011).

10.3.2.2. Against single-sex schooling. Recall that are very little differences, cognitively speaking, between girls and boys. Thus, those against single-sex schooling state that the argument used by proponents of single-sex schooling is founded on pseudoscience and does not have any real basis. They also say that these settings increase gender division, segregation, and stereotypes due to the divide they present. Research supports this argument (Hilliard & Liben, 2010; Bigler & Liben, 2006; Martin & Halveron, 1981). 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).

10.3.2.3. The evidence. Most research 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). Findings supporting single-sex schooling tend to disappear when critical confounding factors are controlled for. For example, many students in single-sex schooling 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 single-sex schooling is excelling, and the conclusion is often that this is due to the single-sex context. When researchers control for the more advanced students, there is no statistical difference showing advantages for single-sex schooling (Pahlke, Hyde, & Allison, 2014; Hayes, Phalke, & Bigler, 2011). 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 general advantage to single-sex schooling in academic performance, there may be some benefits to single sex schooling. There may be some slight advantages for girls in math though 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 standpoint, and very little is known about the long-term impacts of single-sex schooling and outcomes (Leonard, 2006).

10.3.3 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. 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 their level of academic motivation, which also impacts their performance in a positive way (Fortier, Valleranda, & Frederic, 1995). Parents who 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 such as luck. This attribution style is one in which a person believes they cannot improve on weaknesses, so if a task is difficult, they do not feel hopeless to overcome it. *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. 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 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. 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) 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 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 discussed gender differences in academic motivations.

3rd edition

Module 11: Gender Through an Industrial-Organizational Lens

3rd edition as of August 2023

Module Overview

In this module, we will 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 will then take a look at equality in the workplace. Do women and men obtain the same experiences and pay? Do women have specific barriers that men do not in the workplace? Finally, we will examine how women try to balance work and family roles/obligations.

Module Outline

Module Learning Outcomes

- Outline the varying goals that men and women may have regarding occupations and careers and clarify how sex-typing and sex-roles impact those goals.
- Explain how equal or unequal the workplace is for women and men.
- Outline the various obstacles women face in the workplace.
- Clarify how women balance work and families to include risks and benefits.

11.1. Occupational Goals

Section Learning Objectives

- Define sex-typing.
- Clarify how sex-typing impacts career goals for men and women.
- Define self-efficacy and clarify how self-efficacy may impact career choices.

11.1.1. Sex Typing and Career Choice

Sex-typing is when occupations are segregated into gender-typical categories, based on the belief that men and women are more suited for particular jobs. 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. Most research shows this happens 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 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 impacted these results. These preferences dissipated when gender stereotyped expectations about the careers were made less obvious (Gadassi & Gati, 2009). Etaugh and Riley (1983) had male and female college students read job applications for stereotypically feminine or masculine jobs. Participants were told if the applicant was male or female, married or single, and if they had children. In general, participants evaluated women who applied for sex-typical jobs most favorably, 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 = masculine), we see both explicit (verbally acknowledged and recognized) and implicit (instinctual, unaware) 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). Neither male nor female college students deliberately or explicitly make career choices based on future family planning (Cech, 2015).

11.1.2. Personal Self-Efficacy

Self-efficacy is the extent to which an individual believes they have the ability to influence their life. Higher self-efficacy leads to higher motivation to take on activities and persevere during hardship (Bandura, 2010). Without self-efficacy, individuals may not believe they can bring about change to achieve their goals and may not persevere through adversity.

Self-efficacy is impacted through various factors. Parent and teacher support may impact self-efficacy in career decision making which can 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 supportive role models. Increased self-efficacy also led to women expressing higher intentions for entrepreneurial careers (BarNir, Watson, & Hutchins, 2011).

A recently developed theory, **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 information is obtained about efficacy. This influences self-efficacy and expectations about outcomes, including career outcomes, impacting goals, actions, and outcomes. Experiences of mastering tasks, vicarious learning, and high positive/low negative emotion influence self-efficacy which also influence outcome expectations about careers (Lent, Ireland, Penn, Morris, & Sappingtoon, 2017; see the article for a pictorial representation of the model).

11.2. Sex and Gender Equality

Section Learning Objectives

- Define discrimination.
- Describe how women may face hiring and pay discrimination.
- Outline gender differences in negotiating and how this impacts pay gaps.

11.2.1. Hiring Discrimination

As discussed earlier, discrimination is when someone is treated differently based on a demographic variable, such as sex, gender identity, sexual orientation, physical status/ability/disability, etc. The rate of women in the workforce has gradually increased over the years, and based off 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 diminish discrimination against historically disadvantaged or overlooked populations. Affirmative action appears to benefit men more than women in some situations. For example, Ng and Wiesner (2007) found that males applying for female-typical jobs, such as 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, such as policing, often needed to show excessive qualification to get the position. Even still, they struggled to secure the position (Ng & Wiesner, 2007).

The difficulty of getting hired based on sex is also known as *access discrimination*. Accessing the opportunity to work in a particular field can be difficult. We will discuss 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). Research shows that males and females are both likely to prefer a male candidate over a female candidate (Steinpreis, Anders, & Ritzke, 1999).

11.2.2. 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). As it relates to gender, this is when a female earns less than a male, 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 performance. The pay gap, although improved to some degree, still exists and is sizable. According to the data from 2019, women make 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 is a sizable difference. 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 show 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 in even female-typical and female-dominated fields (Ancis, 2017).

There are a few theories about why this occurs. One theory is the *supply-side theory.* This theory proposes 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. Even when men and women have the same skill sets and qualifications, women make less than men. Thus, there must be something else that explains a portion of the picture. *Demands-side theory* suggests the environment or workplace contributes to the pay gap, where the workplace desires females less and pays them less. Both theories might explain portions of the pay gap, however, because the gap is still present even when women are equally or more qualified, 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 in which women tend to work 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 women, 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 as employees, and because of this, they receive fewer opportunities. Mothers also tend to work fewer hours and need more time off, 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 more likely to be called for an interview over nonfathers, when looking at male applicant pools.

11.2.3. Negotiations

Males are more likely to negotiate a higher starting salary than females. Men also have better outcomes after negotiating than females (Gerhart & Rynes, 1991). This starting salary difference between men and women continues to grow. If a man's negotiated starting salary is $5,000 higher than a woman's, and each receives a 3.5% bonus per year, the pay gap will increase to $6000 after 5 years and will continue to increase with each passing year. This is the phenomenon of *accumulation of disadvantage* – the gradual widening of a pay gap based on an initial salary gap (Babcock & Laschever, 2003). To observe how much this gap can grow, try using this calculator: http://www.easysurf.cc/fsalary.htm.

Different results of salary negotiation may be based on a combination of factors. First, consider gender roles 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. Research indicates that women tend to be more cooperative, rather than assertive, in negotiations than men (Walters, Stuhlmacher, & Meyer, 1998). They also may be less likely than men to know their worth and accept 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. Additionally, 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 negotiations, and females penalized both men and women. 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).

There are situations where women negotiate more assertively. One example is when a women advocate for other people, rather than when advocating for themselves (Babcock & Leschever, 2003; Babcock, Laschever, Gelfand, & Small, 2003). Women may also negotiate more effectively 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 gender role (Mazei, et al., 2015).

11.3. Obstacles

Section Learning Objectives

- Define the glass ceiling and explain not only what it is, but what contributes to the continued presence of the glass ceiling.
- Clarify what the glass cliff is and the impact it has on women.
- Explain what sexual harassment is, the prevalence of sexual harassment, and the impacts it has on work performance and goals.

11.3.1. Glass Ceiling

The term glass ceiling was first used to define an invisible barrier that prevents women from being promoted to the highest positions in a company/organization. The barrier exists due to stereotyped beliefs that drive discriminatory behaviors. Despite women being equally likely to be employed compared to men, more likely to hold entry-level positions with college degrees, and holding the majority of higher education degrees (undergraduate and masters), only 14% of top executives at companies are females with even fewer 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 of upward movement in the workplace stalled for women. (Kernodle, 2017). The glass ceiling contributes to women having lower-level positions, less opportunity for promotion, and less pay.

Companies may wonder if a woman will want to have kids and divide her time and attention between work and her family. However, this assumption is not made for men in the same way it is for women. This mindset reveals that maternity is 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 opportunities 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; 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 do not adopt some masculine traits, they may not be respected in their role; however, when they do adopt some of these traits, they are less liked (Ancis, 2017).

11.3.2 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. Men are more likely to be promoted to leadership positions in high performing, stable companies, whereas women are more likely to be promoted in unstable and underperforming companies. In this way, once women have pushed through the glass ceiling earned a high promotion, they can find themselves at risk of losing everything, teetering on the glass cliff of an unstable company. 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 blame for company failures (Ryan, Haslam, & Postmes, 2007). Placing a woman 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. Interestingly, while women readily acknowledge this phenomenon, men may be more reluctant to acknowledge it (Ryan, Haslam, Postmes, 2007).

11.3.3. Sexual Harassment

Sexual harassment can be difficult to identify. While some sexual harassment may be obvious, other behaviors which constitute sexual harassment may be less so. If a "reasonable" person would label the behavior as hostile, then it is likely considered sexual harassment (Weiner & Gutek, 1999). Moreover, if the behavior is not a choice and is forced on someone, making them 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 comments on her appearance and calls her 'babe.' *Quid pro quo sexual harassment* means "this for that"and is when sexual advancements are tolerated to allow the individual to advance or be kept from punishment. This type of harassment often occurs with someone who has more authority than the victim, threatens or asks for sexual acts in exchange for the victim getting some work-related benefit, such as a promotion, or threatens them with punishment, such as a demotion or being fired if they do not engage in the act (Helgeson, 2012).

Sexual harassment can happen 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 may be unhappy and 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 if occurring infrequently, sexual harassment can have very negative impacts on women (Schneider, Swan, Fitzgerald, 1997).

11.4. Work and Family

Section Learning Objectives

- Describe the stereotype content model and how it relates to stereotypes of women, especially

pregnant women.
- Describe the multiple role theories and the risk and benefits of holding multiple roles.
- Clarify the unique challenges women may face when holding multiple roles.

11.4.1. Stereotype Content Model

The perception of warmth and competence leads to perceived competition and status, according to the **stereotype content model**. The various combinations of these characteristics (i.e., warmth and competence) lead to different outcomes. 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 and skillful they are. 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 get paid for their work) may be pitied. Below are the four combinations that occur in this model (Fiske, et al., 2002).

1. **Admired Group:** High in warmth and high in competence. Middle class individuals may be stereotyped 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 4 tends to lead to both active helping behavior but also passive neglect (Cuddy, Fiske, & Glick, 2008).

11.4.2. Pregnancy Discrimination

An amendment to Title VII of the Civil Rights Act (1964) protects women from discrimination related to pregnancy or childbirth, defining such as sexual discrimination, and thus, unlawful. This amendment is known as the Pregnancy Discrimination Act (PDA; U.S. Equal Employment Opportunity Commission, 2018) and 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., 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 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 discrimination is 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. They may even be patronized. Men tend to worry more than women about the potential for pregnant women to be irrational or overly emotional (Chrisler, 2017).

11.4.3. Balancing Work and Family

Nearly 70% of women that work also have children and a partner (Bureau of Labor Statistics, 2010). The *role scarcity hypothesis* posits that multiple roles 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 choices must be made about where to devote time (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 one cannot work overtime at work and come home to finish all the laundry. *Role conflict* is when one role prevents or conflicts directly with the other, or two obligations at once. An example of this would be an after-hours work event and a child's baseball game being at the same time.

Role expansion hypothesis, also referred to as role enhancement hypothesis, argues that individuals 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 a child's baseball game, one might network with a company that can alleviate a burden in your current company's end-of-the-year budget. Or, perhaps a significant other offers a suggestion for meeting at work that ends up proving helpful. Maybe a role as a physicians' assistant allows one to understand the level of care one's child needs when running a 103 degree fever. There are more benefits than drawbacks to multiple roles according to this hypothesis (Barnett, 2004)

Module Recap

In this module, we began 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 the 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.

3rd edition

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Glossary

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