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## Sex Differences in Communication During Times of Conflict

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# **SEX DIFFERENCES IN COMMUNICATION DURING TIMES OF CONFLICT**

A Master's Thesis

Presented to

The Graduate College of

Missouri State University

In Partial Fulfillment

Of the Requirements for the Degree

Master of Arts, Communication

By

Erin J. Snider

May 2021

# **SEX DIFFERENCES IN COMMUNICATION DURING TIMES OF CONFLICT**

Communication

Missouri State University, May 2021

Master of Arts

Erin J. Snider

## **ABSTRACT**

Although current research indicates small effect sizes with sex differences in communication and some believe gender and culture to be the primary influence of conflict communication style, i.e., abstraction and perception, emotional talk, conflict management styles, capacity to empathize, and argumentativeness style, sex may be more responsible because of the biological properties of brain function and hormone effect. This research intends to compare male and female perceptual and behavioral reactions during communication in conflict. The measure of sex (i.e., the biological difference between men and women) in communication during conflict is used for this study. To ensure a homogeneous sample with respect to certain demographic variables, students in a public speaking course from a large Midwest university served as subjects for the study; 161 undergraduate students, 80 identified as male, 79 identified as female, and 2 missing. They were given an online survey for extra credit. The Institutional Review Board approved the survey distributed. The survey consists of five demographic items, twenty-two Likert scale questions about gender, twenty Likert scale questions about conflict style, and four Likert Scale questions about meaning coding in conflict situations. Using an Independent T-test, the results showed no significant difference between the two sexes and their perception of messages during conflict.

**KEYWORDS:** Sex differences, sex, conflict, perception, communication, clarity, disclosure, appropriateness

# **SEX DIFFERENCES IN COMMUNICATION DURING TIMES OF CONFLICT**

By

Erin J. Snider

A Master's Thesis  
Submitted to the Graduate College  
Of Missouri State University  
In Partial Fulfillment of the Requirements  
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In the interest of academic freedom and the principle of free speech, approval of this thesis indicates the format is acceptable and meets the academic criteria for the discipline as determined by the faculty that constitute the thesis committee. The content and views expressed in this thesis are those of the student-scholar and are not endorsed by Missouri State University, its Graduate College, or its employees.

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# INTRODUCTION

## Overview

Biological differences between men and women contribute to many sex-specific genetic illnesses, disorders, and behaviors. Biological differences are measured in a variety of ways. This paper discusses the neurological, hormonal, and chromosomal components that measure and influence behavior differences between them. Many scholars seem to believe gender and culture significantly influence behavior and communication (e.g., perception and clarity of a message, communication skills like self-disclosure, appropriateness in communication, and conflict management style). I believe sex is more responsible because of the inescapable and apparent difference in the genetic makeup of men and women and how those genetics combine with neurological differences (brain functionality), hormonal impact differences (levels and secretions), and chromosomal differences (genes) influence behavior.

Both sex and gender can impact communication. Most persons assume sex differences in communication because they can tie one's behavior to individual biological composition. And some will consider that culture and gender preference impact communication too. When combined (sex and gender), the behavior and the effects that behavior has on a person's communication style are difficult to demonstrate. Because sex and gender are interconnected, it is difficult to delineate which traits are more responsible for behavior and communication style, but not impossible.

Evidence in previous research has indicated that finding and showing communication behavior differences in sex is problematic on a biological level. This study aims to determine communication style based on behavior, can and has been proven to be related to one's physical

nature. Nature does impact clarity, communication skills and preference (like self-disclosure), appropriateness in communication, and conflict management style (Burgoon & Hale, 1988). I hope to provide quantitative data to support this theory.

## **Gender and Sex**

It is essential to clarify the two terms most used in this research, gender and sex. These terms are often interchangeable in scholarly research, depending on the nature of the topic. Because of the strong tie gender and sex have with each other, it is easy to mistake one for the other. In this paper, the term sex refers to an individual's biological and genetic composition regarding their reproductive functions—either male or female. Gender insinuates characteristics about and differentiating between femininity and masculinity preferences. Most often, gender is associated with sex-based social structures (culture) or gender identity.

Many scholars often use the term gender instead of sex to denote the sexual connotations of the term. To prevent readers from focusing on the sensual aspect of the word sex, they use gender as the description for a man or a woman. Some prefer the term gender when studying individuals' psychological and social processes and their impact on the behavior and belief of one's sexual orientation. Sex in this paper's use refers to the biological attributes in humans and animals—the state of being male or female.

Kirtley and Weaver (1999) say that "apparent differences may play only a small role in the cognitive and behavioral processes that underlie communication (p.5)." Biological sex plays no significant role, but gender does (Kirtley & Weaver, 1999). However, sex differences and gender often overlap and intermingle, i.e., feminine males, masculine females (Kirtley & Weaver, 1999). So, the understanding of both is essential.



Tannen (1990) contends that males and females can be likened to different cultures, each possessing different language use functions. Tannen (1990, p. 42), for example, argues that "instead of different dialects, (males and females) speak different genderlects (Kirtley & Weaver 1999)." If sex differences in communication traits are likely and, as mentioned by some scholars, predisposed, conflict episodes in communication and outcomes may be impacted. If culture (gender) is a factor influencing behavior, the communications will most likely be affected but may inherit generalized expectancy or stereotypes with it. I contend that both biological sex and gender play a role in communication results.

The hope is that this paper will demonstrate that biological sex differences make a difference in communication during the conflict, not denying that gender roles, stereotypes, and nurture may also contribute to communication differences. Because one cannot escape one's ideological frame of reference due to being either a man or woman, we intend to measure sex, not gender, in communication during conflict and assume the surveyors to identify with one.

Researchers have indicated no science could determine the difference in communication between the sexes should they not have a balanced scientific anthology on the topic. There needs to be a precise examination of the similarities between men and women before studying the differences (Canary & Dindia, 1998). Researchers use the term 'beta bias' when referring to this type of belief. These individuals presume there to be few differences between the male and female sex. In contrast, 'alpha bias' means they believe that there is a fundamental difference between men and women (Canary & Dindia, 1998). In this paper, the idea remains relatively beta bias – remaining aware of many similarities between sexes while determining some significant differences in communication between the sexes due to their biological makeup.

## **Sample Sex Differences**

**Neurological.** Some research has indicated that differences in sex behaviors stem from differences in processing strategies (Troyer et al., 1997). There are some scientifically proven explanations for different thought patterns between a man and a woman (Troyer et al., 1997). Scholars and scientists are working to establish a relationship between male and female brain networking and behavior. They are specifically working to provide evidence of networking differences in the male "clustering" pattern and female "switching" pattern of networking and how those patterns could explain the cognitive functions of a man's brain and a woman's brain (Troyer et al., 1997).

Sex differences in cognitive functions are often contested. Recent work suggests that sex differences do stem from different processing strategies utilized by men and women. While these processing strategies are likely reflected in different brain networks, so far, the link between brain networks and processing strategies remains speculative (De Vries et al., 2002). However, in a study by De Vries et al. (2002), they look for the first time at the link of sex difference in the brain activation patterns to sex differences in processing strategies. This link utilizes a semantic verbal fluency task, and the results show that men displayed higher activation in the brain network supporting clustering.

In comparison, women displayed higher activation in the brain network supporting switching. Verbal fluency is supported by two different strategies – clustering and switching. Several neuroimaging and brain lesion studies suggest that clustering and switching recruit different brain networks (DeVries et al., 2002). Verbal fluency tasks are widely used in cognitive psychology and the neuropsychological assessment of search and retrieval processes from phonemic and semantic memory (Raboutet et al., 2009).

These tasks typically require participants to generate as many words as possible according to particular rules and during a specified time interval. A semantic fluency test requires a person to list words that belong to a specified category, such as "animals" or "fruits." The phonemic fluency task, also known as the initial letter fluency task, requires participants to generate words from initial letters (typically F, A, and S or C, F, and L) (Raboutet et al., 2009). While the two fluency tasks share are similar, they require different cognitive processes and rely on different brain regions.

Tests of verbal fluency in a clinical setting have traditionally measured executive functioning and dysfunction in patients with neurological damage or neurodegenerative disorders (De Vries et al., 2002). This research suggests that these tests not only request executive functioning but require many other different cognitive processes, including memory, self-monitoring, cognitive flexibility, phonetic encoding, word knowledge, verbal long-term memory, and verbal intelligence (De Vries et al., 2002). This type of testing activates the cortical and subcortical brain areas. Moreover, the (left) inferior frontal gyrus (IFG) was found to contribute to verbal fluency along with the dorsolateral prefrontal cortex (DLPFC), medial and lateral temporal areas, anterior cingulate gyrus (ACC), supplementary motor area (SMA), premotor cortex, the insula, and the cerebellum (De Vries et al., 2002). Usage of these areas is, however, dependent on whether the task is phonemic or semantic.

Several neuroimaging and lesion studies suggest that phonemic fluency primarily recruits frontal brain areas, while semantic fluency depends more strongly on temporal areas (De Vries et al., 2002). Troyer et al. (1997) suggested that verbal fluency requires the co-operation of two different strategies, clustering and switching. The clustering strategy refers to the generation of words within one subcategory, described as a relatively automatic process. The switching

approach reflects the age of successive terms not belonging to the same subcategory, requiring increased cognitive flexibility and reflecting a more effortful process (Troyer et al., 1997). It is proposed that participants first generate words within one subcategory until they are unable to come up with any other term. Then they switch to another subcategory (Troyer et al., 1997).

Clustering is often described as needing semantic memory access, whereas switching mainly requires initiation and cognitive flexibility. Both clustering and switching performance can be decreased under divided attention conditions (Troyer et al., 1997). Meaning if one is distracted, it may influence their performance negatively. Accordingly, temporal lobe functioning seems crucial for the successful initiation of clustering, whereas the switching strategy appears to rely on the frontal lobe to function.

Interestingly, human neuroimaging studies also indicate that the anterior cingulate cortex (ACC) lies on the medial surfaces of the brain's frontal lobes and plays a critical role in the organization of thought and action (Yeung & Nieuwenhuis, 2009). In particular, EEG and fMRI studies regularly report heightened ACC activity in complicated or challenging conditions. Examples of this are when an individual tries to override habitual actions or decide with multiple alternate options or when errors are made (Yeung & Nieuwenhuis, 2009).

According to one prominent theory, ACC is also considered a conflict-monitoring function held to play a vital role in regulating thought and action by signaling the need for increased attentional control (Yeung & Nieuwenhuis, 2009). This function also helps in monitoring for conflict between competing responses when decision-making is complex or uncertain. The emerging consensus is that ACC plays an essential role in value-based decision-making (Yeung & Nieuwenhuis, 2009).

Another study (Svedholm-Häkkinen et al., 2018) indicated brain differences that suggest men and women think differently or have a different way of perceiving things due to cognitive brain type or cognitive profiles. This profile consists of gender roles, gender preferences, and sex differences in empathizing and systemizing, which according to Svedholm-Häkkinen (2018), are the fundamental cognitive dimensions that create gender differences and contain the distinction between men and women.

The concept of brain type (Svedholm-Häkkinen et al., 2018) is significant in that an individual can make a distinct way of making sense of things: We all have both systemizing and empathizing skills and interests, but for some individuals, one dimension is more developed than the other. The development of empathizing and systemizing leads to categories, such as the female brain type and male brain type. Meaning, the female's empathizing type is stronger than systemizing, and the male systemizing type is stronger than empathizing (Svedholm-Häkkinen et al., 2018).

Interestingly, studies of gendered cognitive function differences in a woman's brain and a man's brain seem superficial. Although considering both brain types in both sexes is essential to understand. More importantly, it is crucial to realize that knowing biological sex differences may be apparent but knowing the brain's cognitive profiles is not. The brain's anatomy and its function in a man and a woman can look and function differently on a neurological level. Still, with all aspects of the person in mind, one must consider that some women have displayed the male brain type and some men display the female brain type. Sex must not be measured alone for differences but gender too.

**Hormonal.** Several studies indicate that apart from age and education level, sex affects verbal fluency performance, with women outperforming men (Troyer et al., 1997). A solid

female advantage has been observed during phonemic fluency, but sex differences in semantic fluency have also been reported (Scheuringer et al., 2020). While some studies imply that there are no or only minor sex differences, verbal fluency seems to be one of the cognitive measures in which sex differences are most apparent (Troyer et al., 1997). Inconsistencies across studies may be connected to variations in age or level of education, which could significantly affect verbal fluency performance (Troyer et al., 1997). Furthermore, very few studies on sex differences in verbal fluency had control for women's hormonal status, i.e., menstrual cycle phase or hormonal contraceptive use, even though both have been discussed to affect verbal abilities.

Some studies suggest that sex steroid fluctuations and a woman's menstrual cycle may influence brain activation during cognitive tasks (Scheuringer et al., 2020). It seems stronger activation in different brain parts occurs during the menstrual cycles pre-ovulatory phase when estradiol levels peak and during the luteal phase of the menstrual cycle when progesterone levels peak (Scheuringer et al., 2020). It can be contended that the intensity of sex differences can vary depending on a woman's cycle phase.

No matter the strategy or menstrual cycle phase, more brain activation in men than women was seen in several brain regions. Besides activation in the inferior parietal lobe, which is not specific to verbal fluency, areas of activation in men compared to women reflect brain areas essential for verbal fluency performance (DeVries et al., 2002). Preceding hormonal analyses revealed that a more robust activation was related to higher testosterone levels in men for some task-related areas. The observation that men show stronger activation in the brain's important language areas is comparable to other studies investigating sex differences in verbal fluency and other word generation tasks.

The above could imply that men need to recruit these areas to a stronger degree to reach the same level of performance as women or compensate for higher demands. Research can further indicate that testosterone may play a vital role in that respect. Regions with greater activation in men overlap to stronger activated regions during clustering compared to switching. Conversely, stronger activation in women than men mostly conform to regions of stronger activation in switching compared to clustering. This difference suggests that men preferentially use the clustering strategy, whereas women switch more often between categories than men (DeVries et al., 2002).

The hormone effect and brain function can show significant differences between each sex. Specifically, how each sex may perceive messages during conflict or respond to conflict emotionally. Brain function and hormone levels may also affect conflict management styles, heights of empathy, and whether they are more or less aggressive in communication during conflict. Analysis of hormone levels relevant to cycle phases are as such: Women had significantly higher estradiol levels than men during their pre-ovulatory phase but not during the menses and luteal phases. Women had significantly higher progesterone levels than men during their luteal phase but not during menses and pre-ovulatory phase. Regardless of the cycle phase, testosterone was significantly higher in men compared to women.

Also, it seems that studies reveal estradiol and progesterone to not affect brain activation in either men or women. In men, but not in women, testosterone was positively related to activation in the left parietal operculum cluster, which could activate defensiveness. Also, the parietal operculum is part of the frontal lobe associated with control and problem-solving. It is indicating that testosterone, not estradiol or progesterone, can affect conflict style.

**Chromosomal.** All sex differences in mammal development originated ultimately from the action of genes located on the sex chromosome (De Vries et al., 2002). Each mammalian develops an X and Y gene contributing to sex differences before the hormones or gonadal development. A study supported by the National Institute of Health (NIH) as part of the Specialized Cooperative Centers Program in Reproduction Research states that the sex chromosome genes contribute directly to developing a sex difference in the brain.

Sexual development in mammals is divided into two main components: sex determination and sex differentiation (Ngun et al., 2011). 'Sex determination' is when the bipotential gonad develops into either a testis or an ovary. This process depends exclusively on genetics. 'Sex differentiation' is the development of the external genitalia and other still other internal reproductive structures. Gonadal hormones drive sex differentiation but not sex determination. Many scholars and researchers believe that sex differences emerged after sex determination was due to the actions of gonadal hormones (Ngun et al., 2011).

Genetic consequences in behavioral and brain sex differences are a highlighted study in the healthcare community (Ngun et al., 2011). Gonadal hormone secretions and gene-related science in the X and Y-chromosome refer to direct genetic differences that may impact the nature of processing and reaction response. Without looking at sex differentiation, this section explains sex differences via non-hormonal influences. Looking only at genes, "numerous X-linked chromosomes are expressed differently in males and lead to sex differences in traits (DeVries et al., 2002, p. 5)." Additionally, "Y-linked chromosome dosage also appears to have significant behavioral effects (DeVries et al., 2002, p. 5)." Both X and Y sex chromosomes, regardless of sex differentiation, can alter behavior.



Studies (DeVries et al., 2002) have been done to prove sexual differentiation of the brain via non-hormonal mechanisms (X- or Y-lined genes) by comparing in mice, the brain, and behavior of two with the same gonads but different complements of sex chromosomes. It turns out Y genes (encoded on the non-recombining region of the Y) might masculinize traits or inhibit feminine development. At the same time, X genes might inhibit masculine development or promote feminine development traits. These results could be interpreted to imply that factors other than gonadal hormones likely contribute to sex differences in behavior.

### **Why is This Study Critical**

As a general follow-up to connectivity analyses (the previous neurological section), men seem to show primarily higher connectivity to regions within the same hemisphere. In contrast, women mainly offer more increased connectivity to areas in the contralateral hemisphere. In other words, men have more vital intra-hemispheric connectivity, and women have greater inter-hemispheric connectivity (De Vries et al., 2002). Cognitive function and verbal communicational skills are affected by the inter-and intra-hemispheric connectivity; this connectivity results in women being less likely to be distracted or impacted by distraction during verbal fluency tests than men. In comparison, men tend to be much more task-oriented and focused. Distraction does, in fact, impact their output.

Hormonal analyses revealed that intra-hemispheric connectivity in the right hemisphere was related to higher testosterone levels in men and a lesser extent in women. It suggests that sex differences in intra-hemispheric connectivity may, at least for the right hemisphere, be hormonally mediated with testosterone. Stronger inter-hemispheric processing in women, on the other hand, could explain the repeated finding of better performance during verbal fluency in

women (Weiss et al., 2006). Most importantly, however, connectivity analyses demonstrated stronger recruitment of the right during clustering in men but switching in women (Weiss et al., 2006). Again, supporting the interpretation that the right hemisphere is more strongly recruited during clustering in men, but switching in women, i.e., the strategy they preferred to use in previous studies (Weiss et al., 2006).

The separation of sex chromosomes and gonadal secretions allows researchers to test for a direct role of sex chromosomes in the sexual differentiation of the brain and other somatic tissues. This separation then allows the ability to test the part of a masculine (XY) contrasted with feminine (XX) accompaniment of sex chromosomes under both masculine and feminine hormonal conditions (DeVries et al., 2002). Though the evidence points to the fact sex chromosomes affect brain function, it seems impossible to deny that gonadal steroids (hormones) and neurological makeup impact the induction of sex differences in the mind and actions of all (De Vries et al., 2002).

The above are a few examples of the measures of sex differences. Though research has a difficult time proving sex differences in communication on a biological level, there is no doubt we all see differences in our daily lives. Opinions about sex differences have personal, professional, and political implications. There are apparent differences between the sexes—those of reproductive roles and inequalities. More specifically, the division of labor, economic security, and the national office of government. But there are also less apparent differences, such as brain function and hormone effect, which can play a role in the social constructs of one's life and contribute to mental and cognitive behaviors and health.

Understanding the how and why of personality development through life and why some of those traits differ between males and females is vital to enhancing humans' lives and

understanding personality evolution (Weiss & King, 2015). Whether it is nature or nurture, there may be individuals who hold almost none of the characteristics attributed to their sex. It is essential to know and understand male and female cultural norms and recognize that biological and genetic composition play a part in how a person behaves, reacts, and responds. Neurological, hormonal, and chromosomal composition complete a person's conduct but may not reflect the sex a person is born. Acknowledging this may, in turn, prevent discrepancies and open dialogue from enhancing communication amongst peers better.

Improved communication, or an improved understanding of different communication patterns between the sexes, can potentially prevent disputes, assist in conflict resolution, and alleviate stress and anxiety (Weiss & King, 2015). When a person can understand that there is a logical reason why another person may act the way they do in certain situations, the more likely that person can adapt, accept, and build stronger relationships. Strong communication skills can facilitate goal achievement and improve job performance. Formidable communication can also help show confidence and enhance message clarity and interpretation. Demonstrating a difference between a man and a woman's communication style due to biological attributes may help each sex embrace message perception differently and more openly.

## **THEORETICAL FRAMEWORK**

This chapter outlines the theoretical framework most relevant to the research performed in this study. I first discuss the Expectancy Violation Theory (EVT) as defined by the founder Judee K. Burgoon. Furthermore, to situate this theory into the appropriate application for sex differences in communication during the conflict, I briefly explain how EVT works differently for women and men. Lastly, I follow up with a section devoted to the explanation of the pervasiveness of sex-role stereotypes. More specifically, how conforming or not conforming to the stereotype can facilitate EVT even when not intended.

### **Expectancy Violation Theory (EVT)**

To better support my theory of sex differences in communication during conflict, I analyze the communication phenomenon- Expectancy Violation Theory. More commonly referred to as EVT, the approach examines how individuals respond to an unanticipated violation of social norms and expectations (Burgoon & Hale, 1988). The goal is to relate EVT to favorable and non-favorable relationship expectations of male and female twosomes. Also, I would like to rereview EVT's negative and positive consequences in those relationships. Communication competence and the ability to strategize conversation is an increasingly desired skill. Recognizing how violations of social norms or conformity to social norms generate positive or negative outcomes significantly impacts exchanged messages between two people. EVT and gender have been previously linked and can be directly related to the direction a conversation could take between a man and a woman. EVT and sex have also been related to communication differences but are much more difficult to prove.

The rise of interest in calculated communication behavior and communication skills supports the importance of studying how violations may be used as strategic, goal-attaining acts. Designed initially to explain terminal consequences of conversational distance changes during interpersonal interactions, the expectancy violations model has been modified and expanded to apply to a more extensive range of nonverbal behaviors and communication outcomes (Burgoon & Hale, 1988). In summation, the model suggests that people hold expectations about others' behaviors and that violations of these expectations trigger a change in emotion, heightening perceptions of the communicator and their behavior; this provokes a determination of whether a violation is positive or negative and in turn influences communication outcomes.

EVT, according to Walther-Martin, (2015), posits that the way an individual processes information relies heavily upon that individual's expectations of others' behavior. So over time, expectancies acclimate to various situations, and generalized behavior is expected of others to respond accordingly. As a result, expectancies take two forms, prescriptive or predictive. Prescriptive expectancies are ideas of what and how events should occur, while predictive expectancies are ideas about an event once it begins to unfold (Burgoon & Hale, 1988). In addition to the prescriptive and predictive aspect of EVT, valence is another facet. Message discrepancies are evaluated either with positive valence—if the interaction is assessed as better than what was expected, or negative—if the exchange is evaluated as more harmful than expected (Burgoon & Hale, 1988).

Another explanation made by Burgoon and Hale (1988) is that various standards for actions tend to be learned early in life. A term most used for predictable learned activities is expectations. Expectations are persistent impressions of the desired actions of others held in

various social situations, which predicts how individuals will respond to a particular situation (Burgoon & Hale, 1988).

Upon reviewing the Expectancy Violation Theory and related research, Levine et al. (2000) suggest (as mentioned previously) that expectations are formed based on social norms, idiosyncrasies, stereotypes, and more. Social norms are assumed by culture to be acceptable for an unknown other, whereas idiosyncratic standards are based on others' prior experience. Traditionally, we expect a person we know to behave the way we would expect other people to act in the same situation. Humans tend to be comfortable when surrounded by familiar behavior, but they may become uncomfortable when expectations are challenged.

Burgoon and Hale (1988) note that expectancies develop from the communicator's characteristics, the viewer's relationship with the communicator, and contextual factors. The communicator's characteristics may include demographics, personality traits, or biological sex (Johnson & Mihal, 1972). When these expectations are violated, there is a change in arousal, "which heightens the salience of cognitions about the communicator and behavior"(Burgoon & Hale, 1988, p. 49). Generally, EVT predicts that negative violations will produce more negative outcomes than confirmations will, whereas positive violations will cause more positive outcomes than confirmations" (Giles et al., 1999, pp. 441–442).

### **Aspects of the EVT Model**

The theoretical framework begins with the notion that participants develop expectancies and preferences about each other's nonverbal behaviors in interpersonal encounters. These expectancies and the belief in EVT are also relatively central in discrepancy-arousal, arousal-valence, and sequential, functional models (Walther-Martin, 2015). The models are reviewed by

their differences and help explain the origins of specific expectancies. These model difference breakdowns are categorized as follows: cognitive, affective, and behavioral models of expectancy (Walther-Martin, 2015).

According to the expectancy violations model, expectancies may include cognitive, affective, and conative components. They are the function of social norms. (Walther-Martin, 2015). In other words, people who do not know each other may form expectations based on their societal norms or standard toward the communicator. Most will make judgments of what behaviors they think are probable, practical, or appropriate for a particular setting.

Conversational expectancies are an example of how the receiver sees the communicators characteristics (e.g., gender, age, personality, style), relational characteristics (e.g., degree of acquaintance, status inequality, liking, relational history), and contextual factors (e.g., environmental constraints, the definition of the situation or task, communication functions being accomplished), and weigh heavily on expectancies (Goldshmidt & Weller, 2000). This type of judgment is a relatively simple process and has helped most people arrive at a final expectancy rather quickly, even though the expectancy theory can be complex. With the above mentioned, most can sense deviance in expectancies very quickly.

Expectancy violations can be physical as well. An example is a behavior, experience, and non-verbal communication (e.g., stance and physical distance, including knowledge-based expectancies. Research shows, for example, that most people experience discomfort, compensate for, and rate as inappropriate an unexpected nonverbal interaction pattern that deviates from intermediate levels of distance, gaze, and sensory involvement (Burgoon & Hale, 1988). Norm-based expectancies like this contribute significantly to the EVT theory but are not exclusive.

Expectancy violations may occur when someone has prior knowledge of the other person or their history. This is called knowledge-based expectancy.

History or knowing one's past may contribute to a better understanding of the individual, reducing the level of harmful expectancy violation. An example of this type of knowledge-based expectancy could be when someone expects more vocal animation from a highly gregarious friend or closer conversational distance from someone hard of hearing (Burgoon & Hale, 1988). Event-based knowledge is a part of this expectancy as well. Data suggests that other sentential elements may play a role in predictive processing. These constraints are based on the person's reflection of a particular event and contribute to expectancy violations when they are not met.

Other types of expectancies, like individual and action expectancies, then reflect the extent to which the expectancy is violated. Habitual behavior of oneself and others in society creates behaviors accepted and expected by all. They then assign evaluations or valences to actions. People who interact develop expectations about each other's behavior, not only in the sense that they can predict the regularities but also to build preferences about how they think others *should* behave under certain circumstances (Burgoon & Hale, 1988).

Are all expectancy violations assumed negative? According to the discrepancy-arousal model and functional model, some would say that not all violations are negative (Douglas & Sutton, 2003). For example, the reaction to moderate deviation may seem very little. On the contrary, if the deviance is deemed high, the response could also be highly arousing, causing negative connotations to expectancy violation. For example, the discrepancy-arousal model holds that significant discrepancies produce large arousal changes, creating negative affect. And the functional expectancy model illustrates that behavior expectations maintain stable exchanges as supported and like the discrepancy-arousal model.



The expectancy violations, arousal-valence, discrepancy- arousal valence, and functional models contend that heightened arousal results in some cognitive association of the violation being negative. In the case of the violations model, the arousal change is suggested to cause an awareness that deters attention away from the interaction's perceived purpose and focuses it on the arousal-the communicator's source. It is implied that deviant characteristics or unexpected behavior make people warier of the deceiver (Burgoon & Hale, 1988). The expectancy violations model proposes that the attentional shift to the relational level makes communicator and message/behavior characteristics more noticeable, causing the violated individual to engage in a two-stage process: interpretation and evaluation, also known as the Communicator Reward Valence.

Those result in the violation act being defined as either a positive or negative, which may affect the interpretation of the violation and mediate the *evaluation* of the violation (Burgoon & Hale, 1988). Violation Valence positively evaluates behaviors, either because they originate from a positively valued communicator, are assigned positive interpretations, or have consensually set positive value within a speech community. Positive violation valence should produce good communication patterns and consequences (Walther-Martin, 2015). It can also be negative violations that generate unfavorable interaction patterns and consequences.

Communicator Reward Valence also entails all pre-interactional characteristics (gender and status) and anticipated future interaction with all interactional behaviors (flattering and amusing personality traits). The reward valence causes the communicator to be recognized as someone with whom it is attractive to interact (Le Poire & Burgoon, 1994). In other words, the benefits of interacting with the communicator outweigh the risk. Communicator reward valence influences a violation's valence in two ways, as mentioned above, interpretation and evaluation.

These processes, as filtered through communicator reward valence, are an interpretive process. First, the receiver must choose if the If behavior(s) is positive or negative. Then the interpreted message must be evaluated. Meaning does the recipient like or dislike the message?

After reviewing expectancy, violation valence, and communicator reward valence of any given situation, it becomes likely that a person can make rather precise calculations about whether the individual who perceived the violation will reciprocate or compensate for the behavior in question. Le Poire & Burgoon (2016) noticed that predictable patterns develop when considering reward valence and violation valence together. In particular, if the violation valence is perceived as positive and the communicator reward valence is also perceived as positive, the theory predicts individuals will react and adopt positive actions as well. Likewise, if one perceives the violation valence as negative and the communicator rewards valence as unfavorable, the theory will then predict that one will respond negatively.

### **EVT and Sex-Role Stereotypes**

Stereotypes result from information-processing shortcuts that allow us to make and interpret information from an overflow of stimuli in our environment (Vaughan et al., 1981). People rely on their visual and other interpretations of others to categorize them according to their perceived normal. Viewers tend to order those interpretations to put a person they are reviewing into a group with similar respect (Vaughan et al., 1981). On a personal level, stereotypes work to maintain individual value systems. Socially, stereotypes function first to create and maintain group ideologies justifying social action and creating and preserving value-laden differentiations of social groups (Vaughan et al., 1981).

Sex-role stereotypes center on the assumption that certain behaviors are more likely, and often more appropriate, for one sex than for the other. They have shared expectations within a society or social group that imply appropriate behavior for a man and appropriate behavior for a woman. To delineate the two expectancies separately, stereotypes are fixed beliefs about a particular group of people (e.g., men are tough; women are affectionate), and roles are the behaviors individuals show in a specific situation (Nicotera & Rancer, 1994). These outlooks are affected by expectations (e.g., males being brave; females compassionate). Generally, scholars suggest that sex-role stereotypes are learned from birth. Children are subjected to their parents' attitudes and others in society and soon develop similar expectations and beliefs. Explicit sex-based stereotypes persist today. I believe this sex-role stereotyping to have significant consequences for male-female communication during conflict episodes.

Other common sex-related stereotypes describe women as communal (e.g., helpful, affectionate, and nurturing) men as agentic (e.g., individualistic, independent, and self-sufficient) (Tannen, 1990). Tannen (1990) characterized women's communication patterns as more accommodating and expressive than men's communication. And according to Tannen (1990), the goal of women's talk is to establish rapport and build relationships versus the man's purpose of maintaining independence and establishing one's status. Consequently, when a woman behaves more aggressively, or a man behaves less aggressively than expected, they seem to suffer social disapproval and be perceived less favorably than when they fulfill normal societal expectations (Nicotera & Rancer, 1994).

As mentioned previously, EVT begins by identifying the pervasiveness and potency of expectations during interpersonal communication – Interpretation and evaluation. So, the receiver must ask this question. Is what I just received normal or not? If the received information is

considered normal and beneficial, the reaction may be positive. If the behavior is viewed as abnormal and not helpful, one's response may be negative. Expectations emanate from characteristics, their relationship to one another, and the context in which their communication takes place (Nicotera & Rancer, 1994).

It is important to remember no matter the association, positive or negative, at some point, disputes will occur in any interpersonal relationship. When a conflict occurs, the relationship between the individuals involved in the dispute is affected. Over the last several decades, scholars have questioned whether there are differences in women's and men's communication and expectations and how such differences might affect behavior between the two. The acceptance and ability to maintain a meaningful relationship with the opposite sex can become difficult if expectancies are often not met and behaviors are misinterpreted. Why then do we sustain these expectancies?

Many scholars have noted the ubiquity of traditional sex roles and expectations in western society as so different that they are considered cross-cultural (Kirtley & Weaver, 1999). As a result of these stereotypes and expectations, men and women may manifest different behaviors when interacting with other individuals. Conversely, the behaviors of men and women in social interactions may be perceived differently by other individuals. So, sex differences may be apparent in individuals' behaviors and perceptions of the individuals' behaviors. What does that mean? Generally, it means that we tend to favor some individuals based on whether they conform or do not conform to our societal standards, specifically whether a man or woman acts the part of a conventional masculine male or predictable feminine female role.

Identified specific qualities in western society associated with men and women, for example, women being compassionate, kind, and nurturing, and men being assertive,

adventurousness, and independent, supports the social expectations that the appropriate sex will enact certain behaviors (Canary & Dindia, 1998). That being said, "when men and women do not behave according to our expectations, we—men and women—become uncomfortable, disapproving and perhaps even defensive (Canary & Dindia, 1998 p. 11)." The findings discussed above undoubtedly extend to various contexts, including interpersonal disputes, and coincide with society's expectations of the interplay between behavior and sex roles.

### **EVT in This Study**

In a situation where individuals face each other to deal with a dispute, the relations between them are influenced not only by what these individuals say during the altercation but also by how they deliver messages about the matter (Canary & Dindia, 1998). In this paper, EVT is used as a framework to show a line of studies on sex roles and expectations of individuals' social behavior. Principles of the theory help conceptualize how observers might evaluate men and women differentially as they engage in aggressive-nonaggressive and affirming-non-affirming communication. In addition to the core concept of expectations, EVT holds three other relevant concepts to this paper, arousal-distraction, interpretation–evaluation appraisal process, and violation valence (Le Poire & Burgoon, 1994). These concepts contribute to communication behaviors and the outcome of communication scenarios between a man and a woman during conflict.

EVT proposes that violations are physiologically and psychologically arousing, distracting attention from what is being said and drawing it toward the offense instead of the actual subject matter. An evaluation must take place. While in a conversation, one is to evaluate whether the expectancy violation is desirable or undesirable, thus resulting in positive or

negative outcomes (interpretation). If each person is physiologically separate, more specifically a man or a woman, how then, in addition to the psychological aspect, is it possible for an individual not to experience some expectancy violation? This study explores the relationship and effects of EVT on opposite-sex communication. We anticipate that our research supports that the two rely strongly on each other and display sex differences in communication during conflict.

## **A REVIEW OF RELATED LITERATURE**

### **Sex Differences and Similarities in Communication**

Scholarly opinions about sex differences in communication are widespread. They include apparent differences in biological sex and reproduction roles, social interaction, and personal relationships. Research in this paper seeks to know whether biological sex differences make a difference in communication during conflict and whether those differences impact message perception. The present chapter surveys relevant findings to explore sex differences in clarity, self-disclosure, appropriateness, and conflict management styles. These concepts are abstracted, and the material of each is reviewed.

Language abstraction is a critical aspect of describing behavioral events (Semin & Fiedler, 1988). Abstraction is typically viewed as a medium by which describers transmit beliefs without conscious awareness or control (Douglas, & Sutton, 2003). Abstraction is strongly related to expectancies and whether those expectancies are violated or are accepted. Biology can contribute to one's abstraction style and expectations. These abstractions can often determine how a person sees, hears, or feels a message.

Additionally, brain function, hormones, and genetic composition (chromosomal makeup) contribute significantly to the abstraction and reaction in communication. Recent studies have indicated considerable evidence concerning sex differences in diverse cognitive processes (see Pletzer (2015) for a review). A man's brain is typically larger than and contains more grey matter (neuronal cell bodies) than women's brains. But women have grey matter *and* white matter, which significantly improves their ability to connect all matter, resulting in better-processed messages throughout the entire brain instead of just sections of the brain as do males

(Weiss et al., 2006). Brain sectioning and usage are further discussed in this paper under the neurological section of sex differences.

There are also microscopic differences in male and female brain biology; Gametes (hormones) and sex chromosomes are some of those. These hormones and chromosomes contribute to the difference in reproductive abilities between men and women and their brains' ability to process stress and complex problem-solving (Kloet, 2013). These hormones and chromosomes and the difference in brain function between a man or woman relate significantly to the three concepts of communication we evaluate in this research, i.e., clarity, self-disclosure, and appropriateness.

Studies suggest that relational, emotional power also contributes to the historic socially constructed gender roles (Klaus et al., 1993). However, what we focus on in the following literature is related to biological differences in communication. Some are relying heavily on the evidence that supports sex differences in diverse cognitive processes (Kloet, 2013). A study by Ramos-Loyo et al. (2004) indicated that there is, in fact, sex difference in inhibitory control processing and core behavioral and emotional regulation in emotional contexts related to brain function.

In recent decades, considerable evidence has emerged concerning sex differences in diverse cognitive processes – more specifically, inhibitory control processing (Ramos-Loyo et al., 2004). Inhibitory control processing is the core component in behavioral and emotional regulation and adaptive responses during dynamic contexts (Ramos-Loyo et al., 2004).

Authors, scholars, and researchers in the Ramos-Loyo et al. (2004) study found variations in the neural areas and hemispheric participation of men and women. The study indicated that men seemed to have higher neural activation than women during an emotional interaction but



less dual hemispheric activation. This finding may suggest that women apply more efficient strategies during said inhibitory phases of processing by mobilizing more neural resources than men. In later stages of processing, they seem to respond to emotional stimuli better.

As mentioned previously, in western cultures, male and female communication styles are so different that they are considered cross-cultural (Kirtley & Weaver, 1999). This theory is demonstrated in multiple research efforts. Specifically, in Kirtley and Weavers' (1999) research, women report a relational, socially oriented communication style during difficult conversations. Whereas men, on average, report a more direct and results-oriented style of communicating. Tannen, along with others (Doyle & Paludi, 1998), has argued that females speak and hear a language of negotiating relationships, connection, and rapport. In contrast, males talk and hear a language of status and independence.

In support, these sex differences in communication style and exploratory regression modeling reveal that females tend to show a greater desire to be social, talkative, and involve others when communicating. (Kirtley & Weaver, 1999). While males emerged as preferring dogmatic, pragmatic, and cerebral aspects of communication. (Kirtley & Weaver, 1999). If this is proper research contributing to a better understanding of male and female conflict communication, it can no longer address the simple question, "Do males and females communicate differently?". They must extend their curiosities to more complicated interactions that contribute to understanding the nature of the sex variable in a conflict, like that person's biological making.

**Clarity.** Sex differences in cognitive performance that influence communicative interactions have become more common in research regarding message behavior (Raines et al., 2016). Processing is used in creating and interpreting nonverbal behavior, and verbal behavior is

linked to message intent or clarity of message. Cognitive processes involving intentionality or deliberateness of conduct are of great interest to many scholars and play a significant role in how clear a message is received (Raines et al., 2016). Decoding and encoding messages, to and from the senders and receivers, must be examined with clarity.

Relevance contributes to transparency in a statement. Knowing the relevance and impact of message intent is difficult to measure. Delineating encoded and decoded in a message is subject to clarity and is nearly impossible to predict. In other words, knowing what is important to another person or trying to learn what their perception may be is an important variable in the approach to understanding communicative intent (Raines et al., 2016).

There is a predominant belief that different kinds of behavioral trends are used during communicative interactions (Raines et al., 2016). These trends should help in various ways to decipher clarity and perception of clarity within an exchange. For example, some scholars predict that a sender probably focuses much more on the clarity of a message if they have a significant interest in the idea's behavior and meaning. Even though others may create a different meaning to that idea, acceptance is more likely to be present. Lack of interest can be related to lack of clarity or vice versa. Each behavior and message have a degree of intent deciphered by the receiver (Raines et al., 2016). Despite evidence of actual encoding differences between diverse modes of nonverbal behavior, purpose, and clarity stand to make a significant difference in others' perceptions.

According to Raines et al. (2016), the relationship between the encoding process and the attribution process involved in decoding the affective state is not black and white. People's signals to recognize behavior as positive or negative may not be the same as those that differentiate message modes. Further, there may be biases in the decoding and encoding

processes that inhibit people from experiencing clarity. Judgments of the situation or person then become difficult to establish. According to Stamp and Knapp (1990), perceivers believe that they follow specific guidelines (i.e., facial expressions, tonality, eye contact, etc.) in decoding others' messages as intentional. The apparent discrepancy between what people say they use and what they employ is an essential finding for beliefs about the assigned ways. Is it possible then to know one's clear intent?

There are discussions on whether people make inferential shortcomings when deciding the meaning for other's actions and that this inadequacy is affected by the degree to which the message is helpful for the spectator—again, relating to expectancy valence and communicator reward valence as explained above. Studies (Raines et al., 2016) indicate that social interactants are not always objective in their views of others' behaviors. And that bias about others' intent is flawed. In general, people could not read messages clearly, whether nonverbal messages were sent with a specific purpose or not (Odetunde, 2013). In summation, people can read the overall tone of a message even when the message is sent without clear conscious intent (Odetunde, 2013). The message may be clear, but not what is meant.

**Self-Disclosure.** The self-disclosure concept, a verbal revelation of personal information from one person to another, grew out of Jourard's interest in the healthy personality (Chelune & Figueroa, 1981, p. 29). Initially, Jourard (1959) argued that authentic self-disclosure to at least one significant other was a requirement for a healthy personality. Later, Jourard's theory was that an optimal amount of disclosure under "specified" conditions relates well to healthy mental stability. It is crucial to remember, though, that too much or too little disclosure under certain circumstances causes issues in one's interpersonal relationships (Chelune & Figueroa, 1981).

So, if one is to balance their self-disclosure to another's expectations, then that self-disclosure can be positively associated with perceived understanding and communication satisfaction (Chelune & Figueroa, 1981).

The recent definition of self-disclosure is the intentionality of revealing information about oneself to others, which is said to produce positive outcomes in a personal relationship where depth is a crucial dimension (Raines et al., 2016). By this depth, self-disclosure varies in the degree to which it involves relatively trivial or intimate issues. Within the context of self-disclosure, Chelune & Figueroa (1981) suggests that "*disclosure flexibility*," that is, the ability of an individual to adequately differentiate various situational and interpersonal cues and adapt his or her disclosures, accordingly, has important implications for effective interpersonal functioning (p. 28). Individuals who are more flexible with their self-disclosure ability will function more adequately than those who do not. Thus, effective interpersonal communication requires the individual to appropriately adapt their disclosures to meet the needs of changing situations and goals for interacting (Chelune & Figueroa, 1981).

Adherence to the rules governing social encounters is an important mediator in the relationship between self-disclosure and psychological adjustment; assuming that there is an optimal amount of disclosure for a given situation (adherence), one must self-disclose as all see fit in a relationship (Chelune & Figueroa, 1981). The failure to find balance in what is considered enough self-disclosure but not too much disclosure in communication during hard conversations can and will sway the interpretation and, therefore, the reactions in communication positively or negatively. This could impact communication effectiveness and the relationship.

Otherwise, over or under disclosure concerning social situational demands could result in the destruction or success of relationship status. *Appropriate* disclosure modulation of an

individual concerning social norms results in effective interpersonal functioning and social implementation. The sex difference with male and female appropriateness and context of conversation needs further examination in this trait.

**Appropriateness.** People behave aggressively with both the same and other gendered individuals; however, the intensity and severity of the aggressive interactions are influenced by the gender configuration of the dyad (Aloia & Solomon, 2017). Men seem less likely to be aggressive with women but more aggressive with another man. In the Aloia and Solomon (2017) study, the researchers defend the notion that opposite-sex interactions are more collaborative. Specifically, male-male dyads are more likely than female-female dyads to use commands, threats, or assertions of authority; in contrast, female-female dyads frequently agree and provide opportunities for others to speak (Aloia & Solomon, 2017). As a result, a male-female dyad seems less likely to erupt in negative discourse. Posing that interactions between recipient sex and sender sex may become suitable and more appropriate in communication. Such that the tendency for male recipients to find verbally aggressive messages as more appropriate from another male rather than a female and female recipients' tendency to see the same.

Another factor that may influence a message recipient's evaluation of verbal appropriateness is the relationship type (Aloia & Solomon, 2017). In a study done on two individuals with a successful past relationship (friends of the same or opposite sex), inappropriateness is rarely explored because of little mis-appropriateness. It seems that verbal aggression is more normative and more acceptable in closer relationships than in a superficial acquaintance.

The recipient's evaluation of the message and its appropriateness of verbal aggression may also differ as a function of the setting's privacy level for the interaction. Verbally aggressive

messages attack the recipient's self-concept (Aloia & Solomon, 2017). When these acts occur in public, they also damage a person's social identity (Aloia & Solomon, 2017). In turn, aggression is imminent. When in a public setting, conflict escalation is more likely when altercations occur because individuals perceive a more significant threat to their social identity (Aloia & Solomon, 2017).

Study's find it challenging to establish sufficient testing on appropriateness based solely on biological sex. Male and female tendencies must be tied to gendered norms concerning appropriateness as well to configure reliable results. Consider, sex composition of the dyad on evaluations of the appropriateness of verbal aggression. Aloia and Solomon (2017) participants that prefer feminine gender identity typically evaluated verbally aggressive messages as more appropriate when they came from males. Participants choosing the male identity considered verbally aggressive messages as more appropriate when a female was the source. An identifying male evaluated verbally aggressive messages negatively when the male gender was the source. Is it possible that from an evolutionary psychology perspective, aggression from a female may be perceived as less consequential to males because males do not compete with females for mates (Weiss & King, 2015)? This question closely relates to sex differences in communication, which contributes to my hypothesis.

**Hypothesis 1.** Men and women differ in their message perception in clarity, self-disclosure, and appropriateness.

**Conflict Management Style.** Conflict is "an interactive state in which the behaviors or goals of one actor are at some degree incompatible with the behaviors or goals of some other actor or actors" and is an inextricable feature of relationships (Steen & Shinkai, 2020, p. 36). Conflict may emerge from a discrepancy in schedule, personality, status, or context between two

or more parties and may be welcomed or avoided by specific individuals. It is how we respond to conflict that determines how we operate in our interpersonal relationships. Finding the sources of conflict and knowing how to best respond to it is essential in resolving a further dispute.

It is no surprise that conflict is an unavoidable facet of relationships. The struggle is finding an area of management that works with all conflict origins and with all different individuals. Conflicts might arise from the incompatibility of behaviors or actions between two or more people (Steen & Shinkai, 2020). Understanding concepts such as the Thomas-Kilmann response patterns help become facile with conflict management and resolution.

In this paper, participants evaluated their conflict management response preference using a Thomas-Kilmann Conflict Mode instrument-based survey. The Thomas-Kilmann Conflict Mode Instrument depicts responses to conflict as balances of agenda versus relationship and maps the five common patterns of conflict response: avoiding, competing, compromising, accommodating, and collaborating.

The avoiding method involves a slight concern for self with little concern for others as well. This method consists of an individual who primarily avoids conflict. They do this evading by settling or accepting. The competing style assumes self-concern and very little concern for others (Thomas & Kilmann, 1978). This strategy entails considering their interests only and with no regard for the other person or party. The accommodating style of conflict management has almost no concern for themselves and a lot of concern for others. An example of this is when one party essentially 'gives in' to the other party to resolve the conflict. The collaborative style has a concern for all involved and focuses on dealing with conflict in a collective way (Odetunde, 2013). Finally, the compromising style has intermediary levels of concern for both themselves and

others (Odetunde, 2013). Compromising as a conflict management strategy signifies a middle ground.

These modes' effectiveness ranges from inappropriate (ineffective) to appropriate (effective) conflict handling strategies. Avoiding and competing are toward the inappropriate conflict strategy, compromising being either appropriate or inappropriate depending on the situation, and collaborating and compromising being appropriate (Odentunde, 2013). This study also examined gender preference and attempted to relate those preferences with the Thomas-Kilmann conflict management style preference.

According to Steen and Shinkai (2020), gender can also influence differences in conflict resolution styles. Several studies show that women prioritize relationships over agendas more frequently than men during conflict times (Steen & Shikai, 2020). Also, Brahnham et al. (2005) found that women were more likely to be collaborative while men were more likely to be avoidant. Another study found that men and women both tended to be more agenda-focused on work and more relationship-focused at home but that women were broadly more relationship-focused than men (Odetunde, 2013).

Many research efforts are conducted regarding the differences and similarities in how males and females manage conflict (Odetunde, 2013). However, even though there are many studies conducted, previous research on sex differences in managing conflict often concludes with inconsistent data (Odentunde, 2013). The results are contradictory. So much so that some studies show males and females employing distinct and different approaches to conflict, while others find no measurable differences at all (Odetunde, 2013). In fact, there was a sex difference; but there was so little variance in selecting conflict management strategies that the findings were determined to be insignificant (Goldshmidt & Weller, 2000).



However, a study was done by Holt and DeVore (2005) that researched conflict style preference. In that study, they found that males reported somewhat higher competing levels, while females reported higher levels of compromise. In more simple words, following the westernized gender role perspective, competitive behavior appears consistent with a masculine gender role, while accommodating behavior seems consistent with a feminine gender role (Odentunde, 2013).

Regardless, it still seems complicated to reach consistent conclusions regarding gender and conflict response because it is nearly impossible to define someone's frame of reference no matter their gender. Factors such as where the person is, work or home, their position in the relationship, history, culture, and bias contribute to their conflict management style. The lack of consistency in gender-patterned responses to conflict is probably due to the inability to measure all those competing factors that make up a person's frame of reference. In other words, gender is only one factor that may help determine a person's conflict management style.

Conflict certainly has its challenges. It can produce positive results by collaboration, or it can produce negative results by hostility. Research on the effects of conflict has found that positive affect is typically associated with pro-social behavior and results in cooperative conflict management styles. In contrast, negative affect may result in competitive behaviors with limited joint outcomes (Bell & Song, 2005). Skillful management of conflicts is an invaluable lesson to master for the home or at work.

What is conflict? Traditional views on conflict describe it as the common dominant aspects of different needs, goals, and interests, with the perceived or actual interference from one party to another party (Steen & Shinkai, 2020). Much research on conflict has focused on negative associations of conflict such as warring egos, dissatisfaction, poor communication,

harassment, and more. From this perspective, conflict implies destruction and can lead to several disheartening behaviors. However, more recent understandings view conflict as having positive and functional aspects (Hopkins & Yonker, 2015). The potential positive and practical element of conflict is that most learn from it. Also, higher levels of creativity and innovation are formed. Improved group decision-making and increased overall team and organizational effectiveness are also present (Hopkins & Yonker, 2015).

Studies using Thomas Kilmann have shown male and female differences in conflict preference (competitive for men and compromising for women). Still, it seems inconsistent and measures only the cultural aspect of the differences. A more reliable biological-related study was performed and reached a finding that indicates a difference between sexes and conflict styles which supports my second hypothesis.

**Hypothesis 2.** Conflict management styles are related to biological sex differences.

## **Summary**

Many biological differences between males and females are apparent. Neurological, hormonal, and chromosomal differences are most commonly measured in research about sex differences in communication helping to answer (1) H1: Men and women differ in their message perception in clarity, self-disclosure, and appropriateness and (2) H2: Conflict management styles are related to biological sex differences. Differences in height, weight, and external genitalia are just a few. Sub levels of the above biological categories are the measure of biomolecules (i.e., forms of sex-related hormones, neurotransmitters, and genetics).

Abstractly males and females exhibit different patterns of transmitting, regulating, and processing communication through biomolecules called Monoamines (Ramos-Loyo et al., 2004).

Monoamines are a class of small-molecule neurotransmitters involved in controlling various processes, including reproduction and sexual behavior, respiration, and stress responses. They are then further subdivided into catecholamines and indoleamine (Ramos-Loyo et al., 2004). The primary catecholamines are dopamine (DA), norepinephrine (N.E.), and epinephrine, synthesized from the amino acid tyrosine. The adrenal glands release catecholamines in response to stress, which affects males and females differently.

In addition to genetic differences, men and women differ in psychological and behavioral aspects as well. For instance, men perform better on specific visuospatial aspects (e.g., mental rotation) than women (Fitzpatrick & Bochner, 1981). Women perform better on specific verbal tasks (e.g., verbal fluency) compared to men (Fitzpatrick & Bochner, 1981). These differences are consequences of social systems and gender socialization.

## PILOT SURVEY

### Methods

**Participants.** A total of 47 undergraduate students, 16 identifying as male, 28 identifying as female, 1 preferring not to answer, and 2 missings participated in the study. Students were volunteers from an interpersonal communication class from a large, mid-western university. They received extra credit for participating.

**Measures.** A 33-item questionnaire was developed for this study. It consisted of five demographic items, twenty conflict resolution questions, and eight conflict management questions (see Appendix A). The eight conflict management questions were developed for this study. They consisted of four scenarios. Each scenario is followed by two semantic differential scales. Reliability for the conflict management scale after four items were removed had a Cronbach's Alpha of .530.

**Procedures.** The survey was distributed to 60 students in an undergraduate communications class, COM 205, via email using Qualtrics. After one week, students were given a reminder email to complete the survey. After an additional week, the survey was closed.

**Data Analysis.** Necessary variables were recorded. And a composite variable measuring conflict management was constructed. Data were analyzed using an Independent T-test.

### Results

The hypothesis was that both male ( $M = 20.2$ ,  $SD = 3.62$ ) and female ( $M = 20.4$ ,  $SD = 5.3$ ) sexes' perception of each other's message is different during conflict. An independent sample t-test did not support this hypothesis ( $t(153.622) = -.191$ ,  $p > .05$ ).

## Discussion

Evidence in previous research has indicated that finding and showing communication behavior differences is difficult to prove. For example, Johnson and Mihal's (1972) study on sex differences in interpersonal conflict showed no gross differences between male and female response patterns related to conflict threat. The research completed for this study has indicated similar issues with those scholars reporting little reliability on sex differences in communication.

In general, there were striking similarities between male and female participants regarding perception and general communication preferences. There were also some differences. If abstracted and reviewed, I firmly believe that these differences could positively affect the two sexes during conflict communication. Evolutionary principles of gender seem to impact message perception. They imply that researchers will most likely never predict human behavior between sexes during conflict communication.

**Limitations.** Cronbach's alpha proved unreliable in this study. Reliability for the conflict management scale after four items were removed had a Cronbach's Alpha of .530. With limited items to draw from for a higher Cronbach's alpha, the survey finished as insufficient. The time the data needed to be retrieved was brief, and the selected pool was small.

**Future Research.** Future research could include a short-answer context box. The prompt for this short answer item would be: Please shortly describe a time you have experienced family conflict. IRB has already suggested that if this prompt were to be in future research, the questionnaire would need to go through the expedited IRB process. The questionnaire's conflict management portion will need to be reexamined to better support a reliable Cronbach's Alpha. Additional research questions will also be an addition to this study.

## **METHODS**

### **Participants**

To ensure a homogeneous sample concerning certain demographic variables, participants from an introductory communication class at a large, Midwestern university served as subjects for the study; 161 undergraduate students, 80 identified as male, 79 identified as female, and 2 missings, were given an online survey for extra credit. Of the students, 146 were between 18-24 years old, and 7 were between 25-34 years old. Eight did not answer. For race/ethnicity, 118 identified as white or Caucasian, 6 black or African American, 13 Hispanic or Latino, 10 Asian or Asian American, 1 American Indian or Alaska Native, 1 another race, 1 unknown, 5 two or more, and 1 prefers not to say. The highest degree or level of education was 153 Highschool, 2 Bachelor's Degree, and 1 Trade School.

### **Measures**

The Institutional Review Board approved IRB-FY2021-256 on 01/03/2021 (see Appendix B). The survey consists of five demographic items, twenty-two Likert scale questions about gender derived from the website, [openpsychometrics.org](https://openpsychometrics.org) (Unknown, 2021), twenty Likert scale questions about conflict style from the website, [Blake-group.com](https://blake-group.com) (Unknown, 2020), and twenty-four Likert Scale questions (4 scenarios with 6 questions for each scenario) about meaning coding in conflict situations. These were created for this survey by using conflict experiences of the author (See Appendix C). The questions about gender were added to the survey based on the pilot study results, which suggested that it was difficult to measure biological sex alone. Also, the questions about the conflict scenarios were rewritten for this

survey based on the pilot study results, which had low reliabilities for the questions about the conflict scenarios.

**Gender Scales.** The 22 Likert scale questions about gender were divided into 11 questions focused on the male gender and 11 questions focused on the female gender. Based on reliability analyses, we eliminated 3 questions on the female gender scale that had the lowest reliabilities, ending up with an 8-item scale with a reliability of .831. For the male gender scale based on reliability analyses, we eliminated 7 questions that had the lowest reliabilities, ending up with a 4-item scale with a reliability of .730.

**Conflict Styles.** There were five variables for the conflict styles questionnaire, each with 4 items for a 20-item questionnaire. For the compromising variable, we eliminated 1 item based on reliability analyses ending up with a 3-item scale with a reliability of .543. We also eliminated 1 item from the accommodating variable, again ending up with a 3-item scale with a reliability of .518. We did not eliminate any items from the avoiding variable for a 4-item scale with a reliability of .684. Again, we eliminated 1 item which had lower reliability from the collaborating scale ending up with a 3-item scale with a reliability of .633. Finally, we eliminated 1 item which had lower reliability from the competing variable ending up with a 3-item scale with a reliability of .490.

**Conflict Scenario Scales.** We measured 3 aspects of communication in conflict—clarity, self-disclosure, and appropriateness. For clarity, we began with 6 items and eliminated 3, which had lower reliabilities for a reliability of .837. For self-disclosure, we began with 6 items and eliminated 4, which had lower reliabilities for a reliability of .758. For appropriateness, we began with 6 items and eliminated 2, which had lower reliabilities for a reliability of .694.

## **Procedures**

The survey was distributed to 161 students in an undergraduate communications class, via email using Qualtrics. After one week, students were given a reminder email to complete the survey. After an additional week, the survey was closed.

## **Data Analysis**

Necessary variables were recorded and constructed composite variables for Clarity, Self-Disclosure, Appropriateness, and the 5 Conflict Styles. Data were analyzed using an Independent T-test.



## RESULTS

Hypothesis 1 stated that men and women differ in their message perception in clarity, self-disclosure, and appropriateness. For clarity women had a higher average score ( $M = 2.90$ ,  $SD = .90$ ) than men ( $M = 2.61$ ,  $SD = .99$ ). This difference was not significant ( $t(155) = -1.78$ ,  $p > .05$ ). For self-disclosure there were virtually no difference in means between women ( $M = 3.24$ ,  $SD = .94$ ) and men ( $M = 3.25$ ,  $SD = .94$ ). This difference was not significant ( $t(152) = .086$ ,  $p > .05$ ). For appropriateness women had a slightly higher difference ( $M = 2.20$ ,  $SD = .70$ ) than men ( $M = 2.02$ ,  $SD = .65$ ). This difference was not significant ( $t(152) = -1.50$ ,  $p > .05$ ).

We also ran correlations between the two gender variables and clarity, appropriateness, and self-disclosure. Clarity was significantly correlated with masculinity ( $r = -.173$ ,  $p < .05$ ). All remaining correlations were not significant. Appropriateness was negatively correlated with masculinity ( $r = -.122$ ,  $p > .05$ ). Disclosure was positively correlated with masculinity ( $r = .071$ ,  $p > .05$ ). Appropriateness was positively correlated with femininity ( $r = .119$ ,  $p > .05$ ). Clarity was positively correlated with femininity ( $r = .09$ ,  $p > .05$ ). Disclosure was positively correlated with femininity ( $r = .06$ ,  $p > .05$ ).

Hypothesis 2 stated that biological sex differences are related to conflict management styles. For accommodating there were virtually no difference in means between women ( $M = 3.22$ ,  $SD = .63$ ) and men ( $M = 3.20$ ,  $SD = .60$ ). This difference was not significant ( $t(152) = -1.41$ ,  $p > .05$ ). For avoiding there were also virtually no difference in means between women ( $M = 2.80$ ,  $SD = .82$ ) and men ( $M = 2.60$ ,  $SD = .80$ ). This difference was not significant ( $t(152) = -1.54$ ,  $p > .05$ ). For collaborating there was no difference in means between women ( $M = 3.00$ ,  $SD = .64$ ) and men ( $M = 3.10$ ,  $SD = .76$ ). This difference was not significant ( $t(152) = .60$ ,  $p > .05$ ).

For competing women had a slightly lower average score ( $M = 2.53$ ,  $SD = .70$ ) than men ( $M = 2.7$ ,  $SD = .61$ ). This difference was not significant ( $t(151) = 1.98$ ,  $p > .05$ ). Lastly compromising showed no difference in means between women ( $M = 3.03$ ,  $SD = .60$ ) than men ( $M = 3.03$ ,  $SD = .66$ ). This difference was not significant ( $t(151) = -.03$ ,  $p > .05$ ).

We ran correlations between the two gender variables and the five conflict variables. Masculinity was negatively correlated with avoiding, ( $r = -.192$ ,  $p < .05$ ), and femininity was positively correlated with collaborating, ( $r = .179$ ,  $p < .05$ ). All remaining correlations were not significant. Masculinity was positively correlated with accommodating, ( $r = .032$ ,  $p > .05$ ). Masculinity was positively correlated with collaborating, ( $r = .155$ ,  $p > .05$ ). Masculinity was positively correlated with competing, ( $r = .10$ ,  $p > .05$ ). Masculinity was positively correlated with compromising, ( $r = .025$ ,  $p > .05$ ). Femininity was positively correlated with accommodating,  $r = .133$ ,  $p > .05$ ). Femininity was positively correlated with avoiding,  $r = .062$ ,  $p > .05$ ). Femininity was negatively correlated with competing,  $r = -.013$ ,  $p > .05$ ). Femininity was positively correlated with compromising,  $r = .144$ ,  $p > .05$ ).

## DISCUSSION

The present experiment sought to extend the purview of expectancy violations theory to sex differences in communication and demonstrate those violations or lack of violations to sex. As a result of all EVT and sex differences data, the behavior was then applied to the examination differences in communication clarity, self-disclosure preference, and appropriateness. Additionally, a review of conflict management styles in relation to sex was conducted. The results suggest that finding significant correlations between the two, sex and conflict management style and sex and communication skills, is difficult to prove.

Data retrieved from this experiment offered little support for my predictions that H1: Men and women differ in their message perception in clarity, self-disclosure, and appropriateness, and H2: biological sex differences are related to conflict management styles. The following communication traits were observed: clarity, self-disclosure, and appropriateness exhibited no significant difference between the male and female sex. Findings related to sex differences in conflict management styles demonstrated no significant difference in any five, Thomas-Kilmann modes of conflict resolution.

Based on external manifestations, this study's findings correlate to many other studies on the same topic. Other experiments have similarly attempted to create violations that approximate the kinds of behaviors reflecting sex differences in communication. Both my research and literature show little support to demonstrate there are, in fact, communicatory differences between the sexes and their trait preference and little data to show a difference in conflict management style. But what data is available supports a slight difference in clarity and a slightly lower average in the conflict management style category, competing in women than in men. The

consistent insufficient proof of sex differences in communication interpretation in this study supports the literature that also assumes difficulty finding sufficient evidence to support this theory completely.

It was argued in the current experiment that sex alone could not be a contributing factor to the way one might contribute but that one's gender identity also needed to be measured. Still, with little evidence to support this, it is virtually impossible to assume above. Leaving us with a conflict question that remains unanswered and merely assumed: does sex determine the communication traits of clarity, self-disclosure, and appropriateness while also affecting conflict style management traits? Further investigation needs to be conducted to solve that matter. Below, I review the limitations of my current research and how to remedy any barriers that may dilute my future determination.

## **Limitations**

Though, evidence of sex effect in conflict management styles has been inconclusive; and it is worthy of further exploration. It can be inferred that the results of this study had too few resources and time available to present significant and reliable data to support my hypothesis. A nonsignificant effect in the current study may be attributable to low statistical power.

There are several limitations that should contextualize this study. The absence of significant support for my thesis may be from executing a short survey study. Perhaps it is possible that a more prolonged interaction could produce more pronounced findings. A plausible interpretation is that participants did not find interaction relatable enough to respond sensibly to a short survey question. The idea of placing a short answer box at the beginning of the survey was considered asking the participant to describe a time of conflict with a family member or someone

close to them. The idea was to stimulate the sentiments felt when in dispute with someone you care about. Unfortunately, due to time constraints, I was unable to include that question in the survey. The survey would have to be re-evaluated and restructured to establish complete anonymity of the participant.

Another possible criticism that could be settled against the current experiment and the model, in general, is that the results might only have been significant if the violation were extreme (DeVries, 2002). As for the effects among sex differences in communication, Can my limitations be explained on both methodological and theoretical grounds? Methodologically, the types of violations used in my survey were not designed to evoke strong enough conflict to arouse the recipient. Without violation arousal, the detection of actual neurological change and culture-based offenses is impossible to identify.

Additionally, small effect sizes would necessitate much larger samples and extremely labor-intensive research efforts. Suppose we were able to establish a larger pool of participants for some time through their daily living. In that case, we may better conclude that sex differences make a difference in communication during conflict. In other words, our communicative goals and concerns would better vary by context and relationship with another party (Dillard et al., 1987); and more reliable data would be achieved.

Also, low scale reliability in the Thomas Kilmann scales was mainly less than .60. With such insufficient findings, the reliability of our measurement instruments could be considered the problem. As well as the lack of a diverse sample. The fact that H2 was not significant could have been due to a lack of reliability in my measurement instruments.

## **Direction for Future Research**

In this case, in future research, I would make more adjustments to violation stimulation. Furthermore, pronounced engagement by participants may yield better results. I would then consider making the experiment an experimental trial rather than a short survey. Maybe a daily journal to record each participant's engagements and how they made them feel based on the perceived message. Asking the question then, how would you handle this conversation in the future? Also, referring to any conflict sections that might be added to their writing through the trial. Significant violation arousal could be worthy of sizeable results. Accordingly, our results were not considered consistent with our general assumption that there was a significant difference in communication traits and conflict management styles in communication between the male and female sex. Future research examining the relationship between patterns of self-presentation and effective interpersonal functioning needs to pay closer attention to contextual factors that determine the appropriateness of clarity, self-disclosure, and appropriateness in communication during conflict.

## **Summary**

The research performed worked to provide evidence supporting our hypotheses that men and women differ in their message perception in clarity, self-disclosure, and appropriateness and that there are sex differences in conflict management styles. Biological differences are measured in a variety of ways. This paper discusses the neurological, hormonal, and chromosomal components that influence behavior differences between a man and a woman and whether those components make a significant difference in message clarity, self-disclosure, and appropriateness of communication in a time of conflict. Many scholars seem to believe this to be true,

particularly Tannen (1990), who believes a man and a woman to have a different language from one another, but also believes that not just sex but gender influence male and female behavior and cognitive responses. For that sake, the research in this study included modes of conflict management preference questions and gender preference data collection with scenarios-based questions to follow.

Perception and clarity of a message, communication skills like self-disclosure, appropriateness in communication, and conflict management style is affected by gender. But I believe sex to more responsible because of the inescapable and apparent difference in the biological influence of a man and women and how those genetics combine with neurological differences, hormonal impact differences, and chromosomal differences to influence behavior.

Evidence in previous research has indicated that finding and showing communication behavior differences in sex is problematic on a biological level. And my research supports that data. Regardless the research yielded information helpful for future research. Research on this topic is of great importance, demonstrating important information critical to successful interpersonal relationships and connectivity to your peers, loved ones, and community.

Understanding the how and why of personality development through life and why some of those traits differ between males and females is vital to enhancing oneself and others' lives (Weiss & King, 2015). Improved communication, or an improved understanding of different communication patterns between the sexes, can potentially prevent disputes, assist in conflict resolution, and alleviate stress and anxiety (Weiss & King, 2015). When a person can understand that there is a logical reason why another person may act the way they do in certain situations, the more likely that person can adapt, accept, and build stronger relationships. Strong communication skills can facilitate goal achievement and improve job performance. Formidable

communication can also help show confidence and enhance message clarity and interpretation. Demonstrating a difference between a man and a woman's communication style due to biological attributes may help each sex embrace message perception differently and more openly.

In support of my hypotheses, I review and apply the Expectancy Violation Theory in detail. To better support the idea of sex differences in communication during conflict, I analyze EVT, its approach which examines how individuals respond to an unanticipated violation of social norms and expectations (Burgoon & Hale, 1988). The goal is to relate EVT to favorable and non-favorable relationship expectations of male and female twosomes. EVT and gender have been previously linked and can be directly related to the direction a conversation could take between a man and a woman. EVT and sex have also been related to communication differences but seem difficult to prove. Stereotypes of sex seem to cloud the vision of message perception and conflict management styles between men and women. So, gender must help in the transition of behavior and why people do what they do in conflict situations.

Stereotypes result from information-processing shortcuts that allow us to make and interpret information from an overflow of stimuli in our environment (Vaughan et al., 1981). They are inescapable and suggest people behave according to the value systems they deem normal. More so, sex-role stereotypes center on the assumption that certain behaviors are more likely, and often more appropriate, for one sex than for the other. These outlooks are affected by expectations (e.g., males being brave; females compassionate) and persist today. I believe this sex-role stereotyping has significant consequences for male-female communication during conflict episodes and skew results looking to delineate between sex and gender.



## **Conclusion**

Evidence in previous research has indicated that finding and showing communication behavior differences is difficult to prove. For example, Johnson & Mihal's (1972) study on sex differences in interpersonal conflict showed no gross differences between male and female response patterns related to conflict threat. The research completed for this study has indicated similar issues with those scholars reporting little reliability on sex differences in communication. However, I think it essential to remember conflict and emotional talk are not wholly occupying communication. To understand conflict, a researcher must also examine other portions of communication study between sexes.

In general, there were striking similarities between male and female participants regarding perception and general communication preferences. There were also some differences. If abstracted and reviewed, I firmly believe that these differences could positively affect the two sexes during conflict communication. Evolutionary principles of gender seem to impact message perception. They imply that researchers will most likely never predict human behavior between sexes during conflict communication. It seems, however, to not affect the everlasting intrigue many scholars have regarding the topic or the efforts in figuring these differences out. More so, figuring these differences out and then explaining why these differences exist. The research in this matter is prevalent and continues to be of common interest.

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## APPENDICES

### Appendix A. Pilot Survey Questionnaire

#### Demographic Questions

- Multiple choice

What gender do you identify as?

- a. Male
- b. Female
- c. Prefer not to answer
- d. (short answer space)

What is your age?

- a. 18-24
- b. 25-34
- c. 35-44
- d. 45-54
- e. 55+

Please specify your ethnicity

- a. White or Caucasian
- b. Black or African American
- c. Hispanic or Latino
- d. Asian or Asian American
- e. American Indian or Alaska Native
- f. Native Hawaiian or other Pacific Islander
- g. Another race
- h. Other/unknown
- i. Two or more
- j. Prefer not to say

What is the highest degree or level of education you have completed?

- a. Some High School
- b. High School
- c. Bachelor's Degree
- d. Master's Degree
- e. Ph.D. or higher
- f. Trade School
- g. Prefer not to say

Who if anyone, currently lives with you in your household? Please include permanent residents only.  
(select all that apply.)

- a. Child
- b. Grandchild
- c. Parent
- d. Grandparent

- e. Roommate/Friend
- f. Romantic partner (spouse, partner, boyfriend, girlfriend, etc.)
- g. None of the above

#### **Survey on message perception – misunderstanding**

- Semantic differential scales

##### **> Misunderstanding #1**

**She:** Your lack of communication is exceptionally frustrating, and I am sick of being ignored.

**He:** Please consider I have a lot going on right now. I only have so much emotional energy to devote to anything.

**She:** Everyone has things going on. Please consider that as well and be respectful of my time.

**He:** You're pressuring me to communicate when I don't want to. I'm going to leave now.

**Q1. He is being clear – clear - unclear**

**Q2. She is being clear – clear - unclear**

##### **> Misunderstanding #2**

**She:** I believe in full disclosure to all parties involved in decision-making. This way, everyone is prepared to have a conversation about it instead of getting defensive about specific ideas that catch them off guard.

**He:** I don't think we should say anything. It might make them mad and ruin relationships before we have a chance to talk.

**She:** I don't see it this way. And think that if someone were withholding information from me, I would be upset.

**He:** Stop trying to control everything. I'm not going to participate in communicating our thoughts to the other parties.

**Q1. Disclosure in a good idea in conflict situations – a good idea - not a good idea**

**Q2. She is controlling in this situation – controlling - not controlling**

##### **> Misunderstanding #3**

**He:** I'm avoiding your calls and the entire situation we are in (laughing).

**She:** That is not okay—you're only causing more tension between us. Communicate better, and you might have one less thing to worry about in the long run.

**He:** But I can't handle all the stress.

**She:** I don't want to handle it alone, so stop being a coward and talk to me.

**Q1. Avoiding in this situation appropriate – appropriate - inappropriate**

**Q2. Calling him a coward is too extreme in this situation – too extreme - not extreme enough**

##### **> Misunderstanding #4**

**He:** I don't know if you have already, but if you haven't, I think you might need to get some counseling.

**She:** What? Don't worry about me. I'm taking care of myself, and frankly, I'm offended.

**He:** I was only trying to help.

Q1. He was genuine with his suggestion to receive help – genuine - fake

Q2. She overreacted to his suggestion – overreacted - underreacted

#### Survey on conflict resolution

- Likert Scale – Rarely->Always

1 = Rarely      2 = Sometimes      3 = Often      4 = Always

1. I explore issues with others to find solutions that meet everyone's needs. \_\_\_\_\_
2. I try to negotiate and adopt a "give-and-take" approach to problem situations. \_\_\_\_\_
3. I try to meet the expectations of others. \_\_\_\_\_
4. I generally argue my case and insist on the merits of my point of view. \_\_\_\_\_
5. When there is a disagreement, I gather as much information as possible to keep the lines of communication open. \_\_\_\_\_
6. When I find myself in an argument, I usually say very little and try to leave as soon as possible. \_\_\_\_\_
7. I try to see conflicts from both sides. What do I need? What does the other person need? What are the issues involved? \_\_\_\_\_
8. I prefer to compromise when solving problems and move on. \_\_\_\_\_
9. I find conflicts challenging and exhilarating. I enjoy the battle of wits that usually follows. \_\_\_\_\_
10. Being at odds with other people makes me feel uncomfortable and anxious. \_\_\_\_\_
11. I try to accommodate the wishes of my friends and family. \_\_\_\_\_
12. I can figure out what needs to be done, and I am usually right. \_\_\_\_\_
13. To break deadlocks, I would meet people halfway. \_\_\_\_\_
14. I may not get what I want, but it is a small price to pay for keeping the peace. \_\_\_\_\_
15. I avoid hard feelings by keeping my disagreements with others to myself. \_\_\_\_\_
16. If I'm angry with someone, I try to stay calm when we're talking. \_\_\_\_\_
17. During an argument, I often say things that I later regret. \_\_\_\_\_
18. Instead of jumping to conclusions, I try to figure out why there's a disagreement \_\_\_\_\_
19. I try to understand if a misunderstanding causes a disagreement. \_\_\_\_\_
20. When I'm involved in a disagreement, I stop and think about what I should say or do. \_\_\_\_\_



## Appendix B. Human Subjects IRB Approval



To:  
Isabelle Bauman  
Communications

RE: Notice of IRB Approval  
Submission Type: Modification  
Study #: IRB-FY2021-256  
Study Title: Sex and the processes of coding meaning in communication during times of conflict  
Decision: Approved

Approval Date: January 3, 2021

This submission has been approved by the Missouri State University Institutional Review Board (IRB). You are required to obtain IRB approval for any changes to any aspect of this study before they can be implemented. Should any adverse event or unanticipated problem involving risks to subjects or others occur it must be reported immediately to the IRB.

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This study was reviewed in accordance with federal regulations governing human subjects research, including those found at 45 CFR 46 (Common Rule), 45 CFR 164 (HIPAA), 21 CFR 50 & 56 (FDA), and 40 CFR 26 (EPA), where applicable.

Researchers Associated with this Project:  
PI: Isabelle Bauman  
Co-PI:  
Primary Contact: Erin Snider  
Other Investigators: Erin Snider

## Appendix C. Study Survey

**What sex were you born as?**

- a. Male
- b. Female
- c. Prefer not to answer
- d. (short answer space)

**Open Sex-Role Inventory. Likert Scale (disagree (1), slightly disagree (2), neutral (3), slightly agree(4), agree (5).**

I think a natural disaster would be kind of exciting.  
I wear a blanket around the house.  
I playfully insult my friends.  
I have taken apart machines just to see how they work.  
I have been very interested in historical wars.  
I have daydreamed about saving someone from a burning building.  
I give people handmade gifts.  
I have thought about dying my hair.  
I have set fuels, aerosols or other chemicals on fire, just for fun.  
I have studied how to win at gambling.  
I decorate my things (e.g. stickers on laptop).  
I have considered joining the military.  
I have kept a personal journal.  
I really like dancing.  
I have thrown knives, axes or other sharp things.  
I leave nice notes for people now and then.  
I have burned things up with a magnifying glass.  
I like guns.  
I think horoscopes are fun.  
I jump up and down in excitement sometimes.  
I take lots of pictures of my activities.  
I bake sweets just for myself sometimes

**Survey on message perception – misunderstanding**

> Scenario 1

**She:** Your lack of communication is exceptionally frustrating, and I am sick of being ignored.

**He:** Please consider I have a lot going on right now. I only have so much emotional energy to devote to anything.

**She:** Everyone has things going on. Please consider that as well and be respectful of my time.

**He:** You're pressuring me to communicate when I don't want to. I'm going to leave now.

**If you were her how would you respond in this situation? (open text box)**

**Q1. He is being clear – strongly disagree->strongly agree**

**Q2. She is being clear– strongly disagree->strongly agree**

**Q3. He is being pressured - strongly disagree->strongly agree**

**Q4. She is pressuring him - strongly disagree->strongly agree**

**Q5. Is he being unreasonable? - strongly disagree->strongly agree**  
**Q6. Is she being unreasonable? - strongly disagree->strongly agree**

> Scenario 2

**She:** I believe in full disclosure to all parties involved in decision-making. This way, everyone is prepared to have a conversation about it instead of getting defensive about specific ideas that catch them off guard.

**He:** I don't think we should say anything. It might make them mad and ruin relationships before we have a chance to talk.

**She:** I don't see it this way. And think that if someone were withholding information from me, I would be upset.

**He:** Stop trying to control everything. I'm not going to participate in communicating our thoughts to the other parties.

**If you were her how would you respond in this situation? (open text box)**

**Q1. Disclosure is a good idea in conflict situations – strongly disagree->strongly agree**

**Q2. She is being controlling in this situation – strongly disagree->strongly agree**

**Q3. I would be upset if information in conflict was not disclosed to me – strongly disagree->strongly agree**

**Q4. If negative information was disclosed to me during conflict I would be upset – strongly disagree->strongly agree**

**Q5. She is trying to regulate the situation too much - strongly disagree->strongly agree**

**Q6. You should not disclose too much in a conflict situation - strongly disagree->strongly agreeE>**

**Scenario 3**

**He:** I'm avoiding your calls and the entire situation we are in (laughing).

**She:** That is not okay—you're only causing more tension between us. Communicate better, and you might have one less thing to worry about in the long run.

**He:** But I can't handle all the stress.

**She:** I don't want to handle it alone, so stop being a coward and talk to me.

**If you were him how would you respond in this situation? (open text box)**

**Q1. Avoiding in this situation is appropriate - Strongly Disagree-Strongly agree**

**Q2. Calling him a coward is too extreme in this situation - Strongly Disagree-Strongly agree**

**Q3. Avoiding in this situation leads to more conflict – Strongly Disagree-Strongly agree**

**Q4. Calling him a coward increases stress - strongly disagree->strongly agree**

**Q5. Conflict is stressful - strongly disagree->strongly agree**

**Q6. Communication in conflict is stressful - strongly disagree->strongly agree**

> Scenario 4

**He:** I don't know if you have already, but if you haven't, I think you might need to get some counseling.

**She:** What? Don't worry about me. I'm taking care of myself, and frankly, I'm offended.

**He:** I was only trying to help.

**If you were her how would you respond in this situation? (open text box)**

**Q1. He was genuine with his suggestion to receive help - strongly disagree->strongly agree**

**Q2. She was being defensive in response to his suggestion - strongly disagree->strongly agree**

- Q3. He was being condescending - **strongly disagree->strongly agree**  
 Q4. She was being too sensitive to his suggestion - **strongly disagree->strongly agree**  
 Q5. He was being helpful - **strongly disagree->strongly agree**  
 Q6. She was overreacting - **strongly disagree->strongly agree**

#### survey on conflict resolution

- Likert Scale – Rarely->Always

- 1 = Rarely      2 = Sometimes      3 = Often      4 = Always
1. I explore issues with others to find solutions that meet everyone's needs. \_\_\_\_\_
  2. I try to negotiate and adopt a "give-and-take" approach to problem situations. \_\_\_\_\_
  3. I try to meet the expectations of others. \_\_\_\_\_
  4. I generally argue my case and insist on the merits of my point of view. \_\_\_\_\_
  5. When there is a disagreement, I gather as much information as possible to keep the lines of communication open. \_\_\_\_\_
  6. When I find myself in an argument, I usually say very little and try to leave as soon as possible. \_\_\_\_\_
  7. I try to see conflicts from both sides. What do I need? What does the other person need? What are the issues involved? \_\_\_\_\_
  8. I prefer to compromise when solving problems and move on. \_\_\_\_\_
  9. I find conflicts challenging and exhilarating. I enjoy the battle of wits that usually follows. \_\_\_\_\_
  10. Being at odds with other people makes me feel uncomfortable and anxious. \_\_\_\_\_
  11. I try to accommodate the wishes of my friends and family. \_\_\_\_\_
  12. I can figure out what needs to be done, and I am usually right. \_\_\_\_\_
  13. To break deadlocks, I would meet people halfway. \_\_\_\_\_
  14. I may not get what I want, but it is a small price to pay for keeping the peace. \_\_\_\_\_
  15. I avoid hard feelings by keeping my disagreements with others to myself. \_\_\_\_\_
  16. If I'm angry with someone, I try to stay calm when we're talking. \_\_\_\_\_
  17. During an argument, I often say things that I later regret. \_\_\_\_\_
  18. Instead of jumping to conclusions, I try to figure out why there's a disagreement. \_\_\_\_\_
  19. I try to understand if a misunderstanding causes a disagreement. \_\_\_\_\_
  20. When I'm involved in a disagreement, I stop and think about what I should say or do. \_\_\_\_\_

#### Demographic Questions

- Multiple choice

What is your age?

- 18-24
- 25-34
- 35-44
- 45-54
- 55+

Please specify your ethnicity

- White or Caucasian
- Black or African American
- Hispanic or Latino

- d. Asian or Asian American
- e. American Indian or Alaska Native
- f. Native Hawaiian or other Pacific Islander
- g. Another race
- h. Other/unknown
- i. Two or more
- j. Prefer not to say

What is the highest degree or level of education you have completed?

- a. Some High School
- b. High School
- c. Bachelor's Degree
- d. Master's Degree
- e. Ph.D. or higher
- f. Trade School
- g. Prefer not to say

Who if anyone, currently lives with you in your household? Please include permanent residents only.  
(select all that apply.)

- a. Child
- b. Grandchild
- c. Parent
- d. Grandparent
- e. Roommate/Friend
- f. Romantic partner (spouse, partner, boyfriend, girlfriend, etc.)
- g. None of the above