EXPLORING GENDER DIFFERENCES IN SELF-TALK CONTENT AND FREQUENCY

by
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I dedicate this to every soul who has been willing to join me on "*A Journey to Emotional Freedom*."

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I would first like to thank the Honors College and Dr. John Vile for giving me this amazing opportunity. You gave me a place to belong and something big to do. I am eternally grateful.

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I bless you all for all your blessings to me.

ABSTRACT

Self-talk is somewhat new as a research topic and within the research, little attention has been given to gender differences in self-talk. However, gender differences do exist in many other areas of human interest. Some of these differences may be culturally determined, such as differences in satisfaction with body image, business mindsets and leadership styles, but there are some areas where biological factors are responsible for the gender differences. A survey with 76 items was given to participants. There were 149 participants, 38 men, 107 women, with 4 participants identifying as "other." Results provided good support for the hypothesis that men and women would differ in self-talk frequency.

PREFACE

I am a senior senior. By that I am stating that I am a returning college student who is old enough to be retired. My desire to return to college intersected with my passion to know more about how people think, feel and how they process those sometimes-conflicting perspectives.

The Honors College at Middle Tennessee State University (MTSU) provided me with a scholarship with the proviso that I would write some type of thesis. Prior to my first semester at MTSU, COVID had become a major player on the world's stage, and as I noticed my thoughts and feelings about the situation, I started looking at my own self-talk and pondering its purpose in helping me navigate the various situations we were all living with. With that thought in my mind, I entered MTSU and discovered I needed a thesis topic. MTSU is fortunate to have a world-renowned expert on self-talk, and after being directed to him by Judy Albakry at the Honors College, Dr. Thomas Brinthaupt and I came up with a direction and plan to look at gender differences in self-talk.

Through volunteer work I do at the Tennessee State Prison for Women, as well as a few churches in the Nashville area, I have learned how important our self-talk is. It can be a friend or a foe, and too many times we beat ourselves up through our self-talk and are not even aware of the damage we are doing. My desire is that the awareness and use of self-talk will become more widely known, understood, and used in positive ways.

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CHAPTER I

INTRODUCTION

Self-Talk: What is it?

There are recorded instances in which Niccolo Machiavelli, a 16th century Italian philosopher and diplomat, had imaginary dinner conversations with historical figures, as well as Carl Jung's interactions with his intrapersonal friend, Philemon (Puchalska-Wasyl, 2015). Talking is a purely human function. Animals can bark, meow or moo, to communicate, but they cannot talk because they are not human. Talking has many purposes, styles, and causes; however, at its core it is communication. Communication essentially contains a message, a sender of that message, and a receiver of the message. Therefore, self-talk is a message formed within a person and delivered to the same person. Questions such as, "What's wrong with you, why did you say something so lame?" is a critique of a message that was delivered outside of self. Statements such as, "You shouldn't do that, you'll get in trouble!" is an internal caution to stop and consider the next step. Even the encouraging, "You can do this!" is an internal cheerleader excitedly shaking virtual pom-poms.

All these examples are types of self-talk. The technical definition of self-talk is a dialog a person has with him or herself and directed at him or herself. The other verbiage related to and used to define self-talk includes auditory imagery, private speech, inner speech, talking to oneself, including inner monologue or dialogue, and self-statements (Brinthaupt et al., 2009). Sometimes the comments can mimic the conversations and statements a person has heard from others. For instance, comments made by parents, siblings, or friends, like "Why do you always do that?" or "You are just as good as

anyone else!" can become a type of learned programming that is later formed into self-talk. Self-talk can also be representative of interactions with various forms of media, with appraisals such as "Gosh, she's beautiful," or "Her life is perfect!"

The topics can be broad or narrow (Puchalska-Wasyl, 2016). There can also be an age-related factor in the type and amount of self-talk (Brinthaupt & Dove, 2012). Self-talk can be characterized by whether the speaker is male or female (Onnela, 2014). People are diverse and similar. People are happy and sad, angry, and glad, but people are people. However, when it comes to communication and gender, there are areas that appear to have some substantial differences. If there are differences in the messages communicated by men and women, as studies indicate, it stands to reason that there are also differences in their self-talk as well.

History of Self-Talk as a Science

Part of the reason for the void in research regarding self-talk lies in the formation of the science of psychology. The "school" model is the original way that psychology was studied. During that time there was a lot of competition and very little cooperation. From 1879 until the 1950s, this legacy handicapped the growth in psychology, and by extension self-talk. Although Sigmund Freud operated within the school model, his views on talk-therapy were revolutionary in the field of psychology. The first move in psychology that lays substantial groundwork for the idea of self-talk is through Cognitive Behavioral Therapy (CBT). *The Cambridge Handbook of the Intellectual History of Psychology* states, "Cognition includes several different processes, including perception, attention, memory, concepts, language, problem-solving, decision-making, creativity, and intelligence. Thus, cognitive psychology is not the study of one thing, but of many"

(Benjafield, 2019, p.486). Even though CBT is very broad, the main thrust is cognition, how individuals see and perceive situations, events, experiences, and themselves.

Norbert Wiley, in his book *Inner Speech and the Dialogical Self,* states, "It is possible that inner speech comes, albeit in a quite crude manner, in the first years of life. If inner speech, even in fragmentary form, starts this early, this makes inner speech a more important part of a human's life" (Wiley, 2016, p.22). If Wiley's assertions are correct, self-talk develops early in a child's life and is instrumental in helping the child develop and conceptualize ideas of self as well as skills.

The science of psychology is still far from the goal of completely seeing the workings of the brain, but it is discovering more pathways for testing, measuring, and understanding the processes and functions of self-talk. One development was the Self-Talk Scale (Brinthaupt et al., 2009). This psychometric scale measures four factors. These include Social-Assessment, Self-Reinforcement, Self-Criticism, and Self-Management. Social-Assessment is the process by which individuals evaluate their interaction with others. Self-Reinforcement is associated with the pride of accomplishment or in the pride of a good outcome in an event. Self-Criticism is the facet of self that criticizes actions and behaviors. Self-Management is concerned with instructing the self, identifying strategies for overcoming difficulties or accomplishing goals (Brinthaupt et al., 2009). Psychology should have an impetus to use the skills at their disposal to better understand the power of self-talk to better educate those who are taxed with assessing and assisting the public's state of mental health on the dangers in, as well as the benefits of, self-talk. One branch of psychology that is pursuing that goal is the psychology of sports.

Sports psychology has historically been very interested in the role of self-talk in performance and training. Athletes who perform well and at a consistently high level engage in certain kinds of self-talk (De Muynck et al., 2020). Self-talk can be described as a form of "meta-monitoring" that can affect emotional responses to performance deficits and induce a change in behavior to provide goal attainment (Brinthaupt, 2019). "Flow" is a term used specifically in sports psychology to denote an intense concentration that allows the participating athlete to zone out everything but his or her performance attainment (Taylor et al., 2018). Not every athlete has the same level of focus that produces "flow," however, in the sport and exercise arena, self-talk can be divided into two parts, automatic or spontaneous self-talk, which can be either positive or negative, and strategic-planning self-talk. Automatic self-talk reduces cognitive distractions, allowing more energy to be directed at performance, while strategic planning is self-talk directed at skill development and performance strategies (Van Raalte et al., 2016). Some studies indicate that when it comes to the lower dimensions of "flow," gender differences hinder women in task focus, achievement experience, emotion control and action-awareness (Eryucel, 2019).

Another area where self-talk is being measured is in dieting and food intake control. Distanced self-talk is the phrase used when individuals address themselves in the third person, using their personal name rather than a personal pronoun, (i.e., I, me). Distanced self-talk is a way for individuals to provide psychological space between themselves from an I or me perspective to themselves from a first name perspective. This psychological space difference allows the person to look at the situation from a broader and more comprehensive perspective (Moser et al., 2017). They can see

situations beyond the present moment, and that new perspective can provide emotional regulation (MacGregor et al., 2017).

Even though it may seem a small difference, the impact made from the language used is significant. This change indicates it is connected to executive function in the prefrontal cortex and can separate persons from the emotional impacts they have experienced in a wide context of uses (Orvell et al., 2020). How this works in dieting is that rather than seeing food in the present moment as something pleasant and tasty, its value is seen as a source of nutrition. If the food is determined to be of little nutritional value, the desire for it is minimized, and provides "effortless self-control" (Furman et al., 2020).

Few studies have been done regarding gender differences in self-talk; however, what studies have been done in sports psychology indicate that gender differences can be small, but also significant. In one study the results indicated that gender differences in internal and external motivation in goal realization were minimal (Turkay, 2014); however, a more recent study has concluded that self-talk gender differences in athletes exist in substantial ways in some but not all areas of the Self-Talk Scale (Bulbul & Akyol, 2020). These areas of significance are in Social-Evaluation and Self-Criticism. The researchers identified Social-Evaluation and Self-Criticism as subdivisions of the Brinthaupt et al.'s (2009) Self-Talk Scale, and state that some women athletes misrepresent themselves in their self-talk regarding the social atmosphere of the sporting event. This negative self-talk is what led to women scoring higher in self-criticism than men on the Self-Talk Scale (Bulbul & Akyol, 2020).

Another study was done to measure the effects of extracurricular activities, like sports, on depression rates for adolescents. Even though evidence suggests that extracurricular activities promote a reduction in depression in both male and female youths, the findings also indicate that girls still have a higher prevalence of low self-esteem than do boys (Bang et al., 2020). If these assessments are accurate, it signals a long-neglected area of gender differences in self-talk that needs to be evaluated.

My introduction to my own self-talk was a pivotal revelation to me. It aided me in learning to overcome emotional issues in my life. Because my professional goals are directed towards counseling, I am very interested in helping people understand and learn to use self-talk in a powerful way to impact their lives. Through volunteer work I have done at the Tennessee Prison for Women, I have developed a passion for women's stories, and a desire to better understand their relationship with the worlds they inhabit. That is what has driven my work for this thesis.

Now that the reader has been introduced to self-talk, the next chapter will investigate various areas where gender differences have been identified. The chapter will start with mental health concerns, look at a few biological differences, focus on communication, touch on differences in areas of business, and end with different ways that men and women have felt and dealt with COVID. That will be followed by methods and results and conclude with my thoughts on the data's details. Throughout this paper, I will use the word "gender" broadly to encompass both cultural roles and biological definitions.

CHAPTER II

LITERATURE REVIEW

Mental Health Differences in Gender

One area where gender differences have been detected is in self-esteem measurements. In a study that correlates positivity with self-esteem, it was determined that female college students had lower levels of self-esteem and optimism for the future than male students (Magee & Upenieks, 2019). The study's sample ranged in age from 39 to 93 and included both male and female participants. This same study concluded that male students reported higher levels of self-enhancement, whereas women were more likely to self-derogate. To self-derogate means to assign oneself to a lower position, place, or condition. One theory for women's higher levels of self-derogation, compared to men's, could be an attempt to thwart external voices of derogation (Kahn et al., 2017). In other words, women put themselves down before someone else can do it.

Gender differences have also been identified in other areas of psychology, as well as other human behavior sciences. One such area is depression for adolescent girls. Although depression rates for adolescents of both genders are prevalent, there is a significant increase for girls in ages 12-18, compared with boys (Ma et al., 2020). There have also been studies done on gender differences in stress, perceived stress, and the relationship of how social support can affect stress levels for individuals. In her study of 1080 participants, Kneavel (2021) confirmed earlier studies that suggest that women have a greater social support system than do men, and even though women report having greater amounts of stress and distress, their social support systems provide a strong

coping mechanism. The study also indicates that in some situations, social support for men can create stress.

In an observational and cross-sectional study on gender differences related to stress, 831 college age students were assessed using self-report surveys (Gacic et al., 2021). Some of the most stressful events and situations for both genders were academic performance, death of a family member, serious illness in the family, and accident of a loved one, unwanted pregnancy, lies told by trusted sources, loss of a study year, uncertainty about life after graduation, argument with parent(s), crisis in general, and infidelity of partner. In many areas of stressors, the genders rated them the same, but in a few areas, stressors had different rankings. There were 30 stressful items in total, listed in rank from most traumatic to least traumatic. For female students, unwanted pregnancy rated higher than for men (#4 compared to #8), feeling unsafe (#19 compared to #24) and men rated higher in partner's infidelity (#5 compared to #11) and watching a game when their team is losing (#23 compared to #30) (Gacic et al., 2021). However, these are areas of difference that tell a story. In exams and grading; loss of a study year; uncertainty after graduation; meeting requirements for class; organization of classes and practical work; availability of literature for exam; and belief in one's efficiency, female students rate all these as of higher importance than male students do (Gacic et al., 2021). What can be understood from this information regarding gender differences, and how do these differences affect self-talk?

There have also been field studies done on slow-starters and non-starters in the academic arena (Zhuoxin et al., 2021). Slow-starters are students who are slow in developing strategies for good outcomes regarding academic performances. Non-starters

are students who have no skill in implementing an academic success plan. The study focused on college students who engage in various levels of procrastination, and how peer interventions affect the slow and non-starter students. Previous studies indicate that men in competitive settings are more motivated by peer interventions than women (Gneezy et al., 2003). However, studies done in non-competitive settings indicate that women respond better to peer interventions in non-competitive settings and work better in cooperative situations than men (Gordon et al., 2000).

Previous studies also suggest that gender composition influences group performance. So, not only is the gender of the individual a factor, but the genders of the other students are also a factor. A study by Lavy and Schlosser (2011) indicates that a higher percentage of women in a mixed group will elevate the cognitive behavior of the entire group. The Lee et al. (2014) study indicates that classes composed of all male students score less well academically than mixed gender classes. The data also indicate that classroom gender composition does not affect female students' performances. The new studies indicate that male peer intervention is successful for slow and non-starter men in competitive settings, but does not aid slow and non-starting women, even though women are more affected by social conformity (Zhuoxin et al., 2021).

Brene Brown is a doctor of sociology at the University of Houston, who researches shame (Brown, 2007). Her research shows that shame indicators for women and men are very different. She explains that shame differs from guilt in that shame encompasses the whole being, while guilt is reserved for behaviors. Markers for shame in women are codified with unobtainable and conflicting identities, as well as body image (Brown, 2007). Her phrase to explain this is, "Do it all, do it perfectly, and don't let them

see you sweat" (Brown, 2012). For men, the driving force is to not appear weak, and any perception of weakness is a source of shame (Brown, 2012). These findings are consistent across variations in age, race, and cultural definitions (Brown, 2007). Dr. Brown states that self-talk drives feelings of guilt and shame, and there is a strong correlation between shame and addictions, violence, suicides, depression, as well as eating disorders (Brown, 2012).

There are also findings that indicate gender differences in eating disorders (ED) and related body image disorders. Current research indicates that women display significantly more problems than men with various eating disorders including Anorexia Nervosa, Bulimia Nervosa, and Body Dysmorphic Disorder (Summers & Cougle, 2016). Identifiers that signify a high likelihood of developing EDs include perfectionism and rumination. Rumination is the state of an inadequate coping style that leads to passive and repetitive thoughts surrounded by negative emotions and includes focusing on practices that lead to depression. Although there is no universally accepted clinical definition for perfectionism, it is characterized by the constant need to meet improbable expectations in a variety of settings (Rivière & Douilliez, 2017). This correlation was high only with women and indicated that men's thinking processes are different from women's regarding perfectionism and possible EDs (Rivière & Douilliez, 2017). Another facet in gender differences relates to body dissatisfaction. Women with EDs constantly strive to lose weight while men strive to gain weight and build muscle (Van Raalte et al., 2016). Perfectionism is a type of prison that holds people hostage. Self-talk could provide alternative resources for many people.

Biological Gender Differences

A study that focused on anxiety in college age students reports that freshmen and sophomore female students have significantly higher levels of anxiety compared to male students (Wenjuan et al., 2020). In a recent study by Staugaard and Berntsen (2021), results indicate that women generally show an increase in post-traumatic stress disorder (PTSD) when compared with men, which was not new information. What is new is the depth of emotion connected to the memories for women, compared to men. Although the study did not find an increase in depression for women, they did find a correlation between gender and the intensity of negative emotions. While there was no difference in gender for benign stimulation, women rated significantly higher in negative emotion to extremely violence events. Researchers theorize that this connection to higher levels of negative emotions could be the initial impetus for higher levels of depression for women (Staugaard & Berntsen, 2021). It is also theorized that this is also why women are more affected by PTSD. In an earlier study of parents whose children had experienced being severely burned, the mothers reported having more severe flashbacks to the event than did the fathers of the children (Egberts et al., 2017).

Another study indicates that although men and women do not differ in the number of involuntary memories, also known as intrusive thoughts, the involuntary memories had a greater intensity for the women (Brewin & Soni, 2011). Women also report higher levels of visual vividness, as well as higher anxiety and aftermath activity after experiencing a flashback (Staugaard & Berntsen, 2021). With a distinction being made between voluntary and involuntary recall, it may be difficult to understand how self-talk could be affected. However, being trained in aspects of self-talk could be a helpful tool

for men and women in dealing with recall of distressing events. Self-talk needs to be studied in the areas of depression and anxiety to discover if there are gender differences that exist in the form and function of self-talk. Studies have shown that "talk-therapy" has been a positive and long-lasting tool in cognitive behavior therapy in the treatment of depression and anxiety. If talking with someone else is an effective aspect of therapy, self-talk should be considered an exciting opportunity as an area of study regarding its use as a tool to be taught in schools and therapeutic settings.

In a recent study of how personality and gender differences affect music listening, 1400 post-graduate students (700 male and 700 female) were given a range of measures to assess extraversion and neuroticism levels, as well as how, why, and when the individuals listened to music (Gupta, 2019). Neuroticism is expressing negative emotions often, while extroversion is being highly social and expressive. This study was a follow-up on earlier studies that have identified gender differences in preferences and uses of music. Gupta and Gupta (2016) found that listening to music significantly decreased blood pressure and heart rates in women but had no significant effect on men. Another aspect of the study indicated that women were more sensitive to music than men. In McFarland and Kadish's (1991) study, it was discovered that women had a greater decrease in temperature than did men, when listening to music. Even though women prefer classical music to hard rock and men prefer hard rock to classical music, women displayed higher physiological responses to heavy metal music than men did (Nater et al., 2006). Excitement produced by music is greater for women compared to men (Panksepp, 1995). Adult women from Sweden use music for emotional regulation and respond more

strongly to the effects of music than men do (Juslin et al., 2011). This is consistent with finding in adolescents in Great Britain (North & O'Neill, 2000).

The recent study of Gupta (2019) categorized music use into eight categories: emotional, cognitive, background, social reward, mood regulation, positive refocusing, refocusing on planning, and positive reappraisal. Overall, the results indicate that women have significantly higher scores in all uses of music, compared to men. The only exception was in the areas of social reward and background use, where men scored higher. This was also affected by men's extroversion levels; however, when women scored high in extroversion, their use of music for social reward and in the background, was higher than for men (Gupta, 2019). When looking at the use of music and its effects on people, and associated gender differences, one could wonder how that would correspond to differences in self-talk.

In a recent study on cognitive load using educational robots, results indicate that school age children process incoming information differently because of their gender (Chen et al., 2021). The findings indicate that girls have higher cognitive load levels, as well as higher levels of competition anxiety, when interacting with the robots, while boys showed higher levels in ease of learning. The boys also showed lower levels of cognitive load. Results also showed that all the boys had educational gains in learning through robots, while a third of the girls were negatively impacted by the educational material delivered through robots (Chen et al., 2021). The negative gains may be a sign of learning disturbances that this group of girls experienced. The visual designs of the programs provided higher learning gains for the boys, compared to the girls. This

information is similar to findings of other studies that have been done on gender differences in cognitive load.

In a commentary in the *Educational Psychology Review*, Bevilacqua (2016) states, "If one accepts this new evolutionary interpretation of the cognitive load theory framework then by extension one must consider that known evolutionary differences in male and female biology and psychology suggests that some kinds of biologically primary knowledge are gender-specific (p189)." It is well established that women have greater hearing capabilities (Abramov et al., 2012) while men have greater visual and spatial assessment capacity (Yuan et al., 2019).

In summary, gender differences are many and varied. It is not a question of whether they exist, but more a question of how much impact these differences have made in the lives of men and women. Specifically, I want to know how gender differences have affected self-talk. If Chen et al. (2021) is talking about altering educational environments to level the playing field for girls and boys, then there should be an interest in understanding how differences in self-talk affect girls and boys, and by extension, women and men.

Communication Differences in Gender

There are also findings in the realm of communication that suggest gender differences. Specifically, research identifies differences in language skills, fluency, and function. In subject groups that were mixture of men and women, the differences in the types of verbiage used were significant. Men tend to be more task-oriented in their speech than women, while women's speech is more social-emotional, and that includes acknowledging other people's contributions (Kaplan, 2016). In a different study another

significant finding is that women tend to address specifics, while men tend to speak about the big picture. This difference would equate to a woman describing the process of making a cake, while a man would speak only of its taste factor (Joshi et al., 2020). This study is an example of interpersonal dialogue, while self-talk is intrapersonal. It is included to highlight gender differences that exist in the general realm of communication. It is logical to presume that the nature and type of dialogue individuals engage in with other people should mirror, to some degree, the nature and type of their self-talk.

Communication is a major component of personal relationships. Communication differences in gender go beyond differences in style. When people engage in communication, they read, decode, and interpret what the other person has said, both verbally and via non-verbal cues. When couples fail to adequately encode, decode, and interpret their interactions, the relationship and the individuals within the relationships suffer. Encoding is the creation of a message a sender wants someone else to know. Decoding is the work of taking the communicated information and deciding what was intended. Studies indicate that most of the time, men do not formulate words, decode, and interpret information as well as women do (Brody & Hall, 2010). Furthermore, couples who have poor skills at decoding and interpreting information also experience more dissatisfaction within the relationship.

A study by Noller (2006) indicates that most of the time it is the husband who is causing a disproportionate amount of miscommunication within the relationship. In an earlier study, Noller (1980) studied communication between intimate partners where couples were told to deliver messages to their spouses, but the messages were also observed and heard by strangers to see if the messages were also understandable outside

of the couple's interactions. Couples were identified as either happily or unhappily married, via self-report. Noller discovered that the messages from men who identified as being unhappy in their relationships sent messages that were confusing and contained mixed messages, the observers determined. Additionally, the men who were communicating with these types of messages had no idea that their messages were mixed and confusing, and not an accurate expression of their true thoughts and feelings. It was determined that the reason for the poor communications from men is due to a lack of skills, as well as performance deficits.

Men's skill levels increase when they are motivated to pay attention and accurately judge the intentions of the message sender. However, men's improvements still are at a disadvantage when compared to women's communication skills (Hall & Mast, 2008). When it comes to self-talk, this lack of skill on the part of men may hamper not only the interpersonal communications within the individuals. It is also possible that the individual's lack of skill in encoding and decoding messages could limit a participant's ability to self-report self-talk accurately.

In a meta-analysis of gender differences in marriage and relationship programs from research done in the last 20 years, there are interesting findings regarding what type of interventions are effective in aiding marriage relationships. The levels of effectiveness of the interventions are shaped by gender (Javadivala et al., 2021). The various types of interventions included within the studies were enrichment, education/communication, counseling, and therapy. The delivery methods ranged from weekend retreats, seminars, online chats, as well as counseling and therapy programs. The duration ranged from 1-day seminars to 12-week programs, with the average program lasting from 5 to 10 weeks.

Research indicates that marriage relationships can provide partners with better economic and social stability, as well as better health and psychological outcomes, in addition to greater satisfaction in general, when compared to single individuals (Jackson et al., 2014). This is true for men and women. The authors' stated goals were to discover which strategies work best in providing help for couples in building better and stronger relationships. The studies contained both distressed and non-distressed couples. In general, marriage and relationship programs (MRP) are more beneficial to women than they are for men. In addition, women who report feeling distressed in their relationships found MRP more effective in changing their relationship satisfaction, and both distressed and non-distressed women rated their relationship communication improved by the MRP, while men did not report it as a benefit. Workshops and seminars were not effective for men, but they were for women.

Again, there seems to be major discrepancies between men and women in fundamental aspects of life, perceptions, and in relationships. Self-talk by its nature and function, should represent or reflect those differences.

The Business of Gender Differences

When it comes to areas of business, it is much harder to compare gender differences. It is not that they do not exist, but there is little consensus regarding the reason for the differences. Women in general have greater job satisfaction (Hodson, 1989). While there is varied speculation as to why women are more satisfied in their jobs, the reasons men are satisfied or dissatisfied in their jobs is constant. For men the big issues are income and position, while for women the priorities are relationship with co-workers, the value of the work, and the hours worked (Clark, 1997). These

differences hold true for disabled workers as well (Yu, & Choe, 2021). In a study that compares the leadership styles of Master of Public Administration (MPA) Directors in educational settings, it is found that although the leadership styles for men and women are very similar with both using a transformational style, there are some significant differences (Sabharwal et al., 2017). Female MPAs saw the most important aspects of the job as idealized influence and inspirational motivation, while men saw their greatest contribution as contingent reward and management by exception (Sabharwal et al., 2017).

In a recent study that used management simulations to help equip current students by practicing in high level competitive business interactions, it was found that female students were uncomfortable with the simulations and felt like they were not comparable to real-life situations (Casile et al., 2021). The educators provided pre-simulation coaching to bring the women up to the level of men in self-efficacy; however, this was not successful (Casile et al., 2021). Why would women lack self-efficacy in practice games where they are required to role play? Why are they uncomfortable in role-play situations, and is there a correlation between a lack of desire to role play and self-talk?

In the area of self-employment there are also some gender differences. Evidence suggests that women place more value on non-wage aspects of self-employment than do men (Clain, 2000). For women the draw is independence at work and a job matching their competences, and for men important considerations are the lack of stress, a beneficial salary and independence (Buttler, & Sierminska, 2020). Although gender differences are an important aspect of understanding self-employment as an option, there may be a need to observe how flexibility itself might be a gender issue, and how flexible working schedules can have different outcomes for men and women (Bari et al., 2021).

Another area of major importance in business is the business of money. Does it matter whether the Chief Financial Officer (CFO) is male or female? In a recent study comparing the gender differences in financial reporting of companies, the conclusion is "yes," it does matter (Gupta et al., 2020). The study found that women CFOs were more likely to accurately report the company's financials, and this is true regardless of whether there is significant oversight. Male CFOs are more likely to mis-represent a company's financials, especially if there is no oversight. Another recent study echoed this sentiment, that in the absence of external pressures men "are more likely to break rules" while women are more likely to "adhere to the rules" (Gupta et al., 2020).

Another study focused on how gender affects charitable giving. Specifically, they wanted to understand how people's self-identity as a charitable person would change with contrasting information in their charitable giving (moral identity), and if gender was a factor (Shang et al., 2020). The study revealed that women, more than men, want to close the gap between their perceived moral-identity and their giving. In other words, when women became aware of the conflict between what they believed about themselves and their behavior, they changed their behavior to align with their personal perception more closely. The authors also concluded that when women were reminded that they had previously given to a certain charity, but had stopped, they more quickly renewed their support (Shang et al., 2020). Other studies have found that women, more than men, believe that moral identification is a fundamental part of their identity (Kennedy et al., 2017). Interestingly, men give more money to nonprofits (Mesch et al., 2011). Are individuals aware of their thoughts and feelings about money? How do financial matters affect self-talk?

COVID and Gender Differences

The last area of gender difference addressed will be related to the experience of the recent COVID event. There are differences in how genders have experienced and been more affected by COVID. More men have died in the pandemic than women, they also have a worse prognosis for full recovery (Spagnolo et al., 2020). However, women have been more affected psychologically than men, experiencing high levels of PTSD (Liu et al., 2020). Women have rated the seriousness of the pandemic more highly than do men (Galasso et al., 2020). Countries whose government leaders are women have acted more aggressively than countries whose main leadership are men (Garikipati & Kambhampati, 2020).

Although everyone has been affected in significant ways by COVID, students have been affected in ways specific to them. A study done in Spain has looked at how the pandemic has affected students and if the differences can be broken down by gender (Rodriguez-Besteiro et al., 2021). Their conclusions are that some aspects of COVID and how college students react to them can be understood through gender differences. Male students consumed more soft drinks, processed meats, fats, pasta, and rice more than female students. Female students perceived the epidemic as much more serious than male students. They also showed significant levels of neuroticism and had fewer coping strategies (Rodriguez-Besteiro et al., 2021). Although female students engaged in significantly higher levels of oral health, they also had higher levels of dry mouth, a condition that is correlated with anxiety. Male students also had higher levels of extroversion (Rodriguez-Besteiro et al., 2021).

The COVID pandemic has also provided opportunities to slow down and take stock of what is important. It has given individuals a chance to understand themselves and their maladaptive coping mechanisms. It has also provided everyone a chance to engage and understand their self-talk. This current time is an incredible and horrific experience on many levels. As Elizabeth Gilbert, author of *Eat, Love and Pray* said on her TED talk, "Human beings can adapt to anything...let us remember how unappreciative we were with things before this happened, things we would love to have again, and take that thought with us into the new world…" post pandemic (Gilbert, 2020). Perhaps self-talk will be one of the good things many humans did not appreciate previously but can now look at as a gift.

Summary and Statement of Problem and Hypotheses

The science of psychology has a rich history of considering male behavior as normal and female behavior as abnormal. This proclivity has led to the current backlash against research that analyzes humans by their sex. Gender neutrality and gender-neutralism are terms used to define this movement. There have been many studies that look at the socialization of gender roles to explain differences in gender. The goal of this research is not to ignore the factors that help define and contribute to gender biases or the discrimination that exists in gender. My goal is to bring recognition to the various types of self-talk and define the areas where gender differences relate to self-talk. Unfortunately, there has been very little research in gender differences in self-talk. If how women see themselves reflects their self-talk, it is imperative for us as researchers to understand how self-talk can inform and/or instruct better mental health outcomes for women of all ages.

Hypothesis 1: Women will report higher frequency in their self-talk. Because the literature indicates that women are more relational and have a greater capacity for communication, I expect women to be aware of and use self-talk more than men.

Hypothesis 2: Women will report lower satisfaction levels in the areas of self-esteem, body image, and social assessment and higher frequencies of mental health history and eating disorders, compared to men. Research suggests that women see themselves more negatively than men do. This hypothesis is based on the plethora of research indicating gender differences in these domains.

Hypothesis 3: Women will show stronger correlations between self-talk scores and areas of self-esteem, mental health history, body image, eating disorders, and social assessment compared to men. Based on the literature review on gender differences, I believe that women's self-talk is performance based, and is often partnered with perfectionism. Since these areas are where gender differences frequently occur, the correlations with self-talk will be significantly higher than for men.

CHAPTER III

METHOD

Participants

Participants were recruited using various online media sources, as well as from direct and indirect solicitation through professors, classes, and organizations at Middle Tennessee State University. No compensation was offered to participants. There were initially 162 participants, with 13 responses being voided due to the survey not being completed. The 149 remaining participants included 38 individuals identifying as men, 107 individuals identifying as women, with 4 individuals identifying as other. There were 84% of respondents (n = 122) who self-identified as white, with 16% (n = 27) representing a variety of ethnicities. The respondents ages ranged from 18 to 77 years (M = 38.71, SD = 19.83).

Materials and Procedures

I used a self-report survey offered through Qualtrics, an online survey system. The survey used two existing measures. The first was the Self-Talk Scale (STS) developed by Brinthaupt et al. (2009), as the base tool to measure gender differences in response to self-talk. The STS is a statistically reliable measure of self-talk and had a combined Cronbach's rating of .899. The STS consisted of 16 items that provided a 5-point frequency scale (1 = *never*, 5 = *very often*). The subcategories included Social-Assessment "I want to replay something that I've said to another person," Self-Reinforcement "I'm proud of something I've done," Self-Criticism "I'm really upset with myself," and Self-Management "I need to figure out what I should do or say." Social-Assessment is the process by which individuals evaluate their interaction with others.

Self-Reinforcement is associated with the pride of accomplishment or in the pride of a good outcome in an event. Self-Criticism is the facet of self that criticizes actions and behaviors. Self-Management is concerned with instructing the self, identifying strategies for overcoming difficulties or accomplishing goals (Brinthaupt et al., 2009)

The survey also used Rosenberg's (1965) Self-Esteem Scale (RSE). The RSE is a reliable and commonly used measure of global self-esteem and self-worth, with a Cronbach's rating of .896. The RSE consisted of 10 items "I feel that I have a number of good qualities," "I wish I could have more respect for myself" that provided a 4-point Likert scale (1 = *strongly agree*, 4 = *strongly disagree*).

In addition to these standardized survey measurements, my survey also included 46 items that were specifically created for this study. Participants rated these items using a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*), unless otherwise indicated, as response options. Appendix A lists ten items in the subsection of Self-Talk Expanded. This section was designed to expand the understanding of self-talk as it relates to gender differences, such as "I sometimes address or talk to myself using my own name."

Appendix B lists ten items in the subsection of Mental Health History. It contained 10 items using a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*), unless otherwise indicated, as response options such as "Do you currently take any prescribed anxiety medication?"

Appendix C lists eight items in the subsection of Body Image and Relationship with Food, using a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*), unless

otherwise indicated, as response options. This section targeted body image with items such as "I shame myself for eating too much."

Appendix D lists 10 items in the subsection of Emotional Intelligence using a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*), unless otherwise indicated. An example item here is "I understand how I am feeling most of the time."

Appendix E lists eight items in the subsection of Social Interaction and Gender Comparisons using a 5-point Likert scale (1 = *strongly disagree* , 5 = *strongly agree*), unless otherwise indicated. An example item is "In a work setting, the sex of my direct supervisor matters to me."

Lastly, Appendix F lists four demographic questions that asked participants to identify their gender, age, race, and occupation. In all, the survey asked for responses to 76 items.

The order of presentation of the measures/sections was randomly determined. The survey was approved by the Middle Tennessee State University's Institutional Review Board (IRB, Appendix G). All ethical guidelines of the IRB were upheld. The participants were informed of their rights and the risks associated with their participation prior to taking the survey, and informed consent was required before beginning the survey.

CHAPTER IV

RESULTS

Descriptive Statistics

There was no significant age difference within the sample. The sample's mean age stands in contrast to the mean age of the participants in most studies which use undergraduate student populations or the psychology department's research pool. In a Self-Talk Scale research study by Brinthaupt and Kang (2014) the *M* age was 20.04 years. In the Brewin and Soni (2011) study on gender, personality, and involuntary autobiographical memory, the *M* age was 20 years. The mean age of my study was almost double the mean age of the other two studies.

Additionally, my sample total sample reported higher levels of overall self-talk frequency compared to previous research. In Brinthaupt and Kang's (2014) STS study the total STS score $M = 50.47$, SD 13.28, compared to my sample's $M = 62.25$, $SD = 12.12$.

Another set of items compared reports of mental health history. As Table 1 shows, men and women did not differ significantly in their history of reporting depression and anxiety.

Table 1. Gender Responses to Mental Health History

	Men (n = 38) Yes%	Women (n = 107) Yes%	Chi-Square	p-value
Major depressive episode?	63%	60%	.131	.847
Diagnosis of anxiety disorder?	32%	41%	1.08	.337
Currently taking anxiety medications?	26%	31%	.275	.682

Note. N= 145.

Table 2 shows correlations between various aspects of the survey and the STS for the entire sample. As the reader can see, pressure related to work performance was the area that had the most correlations with self-talk scores. The significant scores were in the STS subcategories of social assessment, self-criticism, and self-management. The survey item "In work or school environments, I appreciate work related suggestions or correction from others," was positively correlated to self-talk scores in the subcategory of self-reinforcement. Survey item "I am more emotional than people of opposite sex," was positively correlated to self-talk scores in the subcategories of social assessment and self-reinforcement.

Table 2. Correlations between Self-Talk Scale and Interpersonal Survey Items for Entire Sample.

Survey Items	Totals	Social assessment	Self-reinforce	Self-criticism	Self-manage
I am intelligent	.070	.095	-.011	.007	.128
Pressure related to work performance	.298**	.309**	-.013	. 322**	.316**
Satisfied with required tasks	-.067	-.144	.053	-.103	-.005
Appreciate suggestions from others	.004	-.093	.213**	-.88	-.015
Gender of those who make suggestions is important	.020	.024	.078	-.082	.041
The sex of supervisor matters	.059	.41	.016	.062	.067
I am more emotional than people of opposite sex	.236**	.189*	.275**	.127	.136

Note. N= 149. * $p < .05$. ** $p \leq .01$.

Tests of Hypotheses

The first hypothesis was that women would report higher frequency in their self-talk than men. Table 3 presents the t-test findings of gender differences in STS scores. As the table shows, women reported more self-talk specifically in the subcategory of self-reinforcement. Although there were not significant differences between women and men in the other areas of self-talk, women also did report more overall self-talk. Thus, there was good support for the first hypothesis.

Table 3. Mean Differences between Men and Women on the Self-Talk Scale (STS).

	Men (n = 38)	Women (n = 107)	t-value	p-value
Self-critical	14.39 (3.83)	15.36 (4.01)	1.30	.197
Self-reinforce	12.26 (4.16)	14.17 (4.02)	2.49	.014*
Self-manage	16.13 (3.95)	17.16 (3.63)	1.47	.145
Social-assess	14.47 (4.44)	15.56 (4.37)	1.31	.192
Total STS	57.26 (13.53)	62.25 (12.12)	2.11	.036*

Note. Standard deviations are in parentheses. *$p < .05$.

According to the second hypothesis, I expected that women would report lower satisfaction scores in self-esteem, body image, and social assessment, as well as higher frequency scores on mental health history, and eating disorders, compared to men. As Tables 4 through 7 shows, there were a few significant differences between men and women's scores in self-esteem, mental health history, body image, eating disorders, and social assessment. Women had significantly higher scores in "Worry about work," "Self-talk and appearance," "Importance of the gender of people who make suggestions," "Importance of gender in a supervisor," as well as, "I'm more emotional than the

opposite sex." However, taken together, these results suggest minimal support for the hypothesis that women would report lower satisfaction levels in the areas of self-esteem, body image, and social assessment, as well as higher frequency scores in mental health history, and eating disorders compared to men.

Table 4. Mean Differences between Men and Women in Mental Health History

	Survey items	Men	Women	*t*-value	*p*-value
1	Feel down/depressed	2.47 (1.16)	2.73 (1.20)	-1.14	.258
2	Feel bad about self	2.76 (1.24)	2.77 (1.15)	-.14	.989
3	Worry about work	2.53 (.95)	3.36 (1.14)	-4.07	.000***
4	Trouble with sleep	3.29 (1.14)	3.55 (1.25)	-1.14	.257
5	Use substances to help mood	2.11 (1.20)	2.04 (1.27)	.286	.775
6	Covid anxiety	2.82 (1.18)	3.09 (1.18)	-1.25	.214
7	Covid & knowing self	3.34 (.97)	3.64 (.91)	-1.69	.094

Note. Standard deviations are in parentheses.
$n^1 = 38$ men. $n^2 = 107$ women
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 5. Mean Differences between Men and Women in Body Image and Relationship with Food

	Survey item	Men	Women	*t*-value	*p*-value
1	Controlling food intake	3.82 (.93)	3.91 (.90)	-.532	.596
2	Shamed when eating	2.84 (1.05)	3.24 (1.11)	-1.94	.054
3	Ideal body weight	2.61 (1.00)	2.92 (1.13)	-1.49	.137
4	Disgusted with eaters	2.29 (1.16)	1.93 (.93)	1.88	.062
5	My body, my friend	3.04 (.96)	2.96 (.95)	.50	.618
6	Self-talk and appearance	2.79 (1.04	3.33 (1.09)	-2.64	.009**
7	Society and food	2.47 (1.16)	2.70 (1.22)	-1.00	.318
8	Judging other's food	2.26 (1.13)	2.12 (.98)	.74	.463

Note. Standard deviations are in parentheses.
$n^1 = 38$ men. $n^2 = 107$ women
* $p < .05$. ** $p \leq .01$. *** $p \leq .001$.

Table 6. Mean Differences between Men and Women in Emotional Intelligence

	Survey items	Men	Women	*t*-value	*p*-value
1	I understand how I feel	3.82 (.69)	3.70 (.91)	.71	.481
2	Emotions and understanding myself	3.53 (1.00)	3.68 (.85)	-.92	.358
3	Emotions and personality	3.92 (.94)	3.88 (.82)	.26	.792
4	Self-talk calms me	3.13 (1.17)	3.47 (1.03)	-1.67	.098
5	Can't calm down	2.18 (1.04)	2.36 (.92)	-.95	.344
6	Don't show emotions	3.29 (.84)	3.09 (1.12)	.99	.326
7	Others don't know my feelings	3.16 (1.03)	3.32 (1.10)	-.79	.434
8	No talk of emotions	2.42 (1.15)	2.76 (1.24)	-1.47	.145
9	How I feel is unimportant	2.13 (.81)	2.14 (1.09)	-.04	.965
10	Feelings are confusing	2.95 (1.19)	3.19 (1.13)	-1.11	.271

Note. Standard deviations are in parentheses.
$n^1 = 38$ men. $n^2 = 107$ women
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 7. Mean Differences between Men and Women in Social Interaction and Gender

	Survey items	Men	Women	*t*-value	*p*-value
1	I'm intelligent	3.89 (.69)	3.79 (.78)	.77	.443
2	Pressure with work	3.76 (.91)	4.08 (.90)	-1.88	.062
3	Satisfied with work tasks	3.79 (.70)	3.56 (.90)	1.42	.159
4	Appreciate suggestions	3.58 (.92)	3.78 (.81)	-1.25	.215
5	Gender of correctors	2.18 (1.18)	2.64 (1.16)	-2.09	.038*
6	Sex of supervisor	1.79 (1.04)	2.50 (1.15)	-3.37	.001***
7	More emotional than opposite sex	2.21 (.74)	3.53 (.99)	-7.49	.000***

Note. Standard deviations are in parentheses.
$n^1 = 38$ men. $n^2 = 107$ women
* $p < .05$. ** $p < .01$. *** $p < .001$.

According to my third hypothesis, I expected that women would show stronger correlations between the STS and areas of self-esteem, mental health history, body image, eating disorders, and social assessment compared to men. Table 8 indicates that women's correlations were not significantly stronger on self-esteem than they were for men. In fact, the men's scores were higher and negatively correlated in all four subcategories of the STS. Women's STS /esteem scores were lower, but negatively correlated as well, with one exception. In the subcategory of self-reinforcement, women's self-esteem scores were positively correlated with self-talk. It is noteworthy that while men's self-esteem scores were negatively correlated with self-reinforcement, women had a positive correlation between these two variables.

Table 9 indicates that there were only a few significant differences between men and women in their correlations of the STS and how it relates to other survey items. Women's scores on "I am intelligent" were positively correlated with self-management

on the STS, and "Appreciate suggestions from others" was positively correlated with self-reinforcement. For men, "Satisfaction with required tasks" was negatively correlated with self-criticism. Men and women both had significantly positive correlations between "Pressure related to work performance" on social assessment and self-criticism, with men having the stronger correlations in those two subcategories. Men also had a higher positive correlation score in self-management related to pressure with work. Although there was minimal support for hypothesis three, there were interesting findings.

Table 8. Correlations between Men and Women on the STS and Self-Esteem Scale (RSE).

	Self-esteem Men		Self-esteem Women	
	R-value	*p*-value	*R*-value	*p*-value
Social assessment	-.381*	.018	-279**	.004
Self-reinforce	-.343*	.035	.209*	.030
Self-criticism	-.449**	.005	-.348**	.000
Self-manage	-.214	.196	-.197*	.042
Totals	-.420**	.009	-.205*	.034

Note. Standard deviations are in parentheses.
n^1 = 38 men. n^2 =1 07 women
*$p < .05$. ** $p < .01$. *** $p < .001$.

Table 9. Correlations of Men and Women between Self-Talk Scale scores & various survey items

	Social assessment	Self-reinforce	Self-criticism	Self-manage
I am intelligent	M: -.107 W: .158	M: -.263 W: .060	M: -.076 W: .59	M: -.035 **W: .196**
Pressure related to work performance	**M: .382** **W: .254**	M: .145 W: -.085	**M: .421** **W: .226**	**M: .519** W: .192
Satisfied with required tasks	M: -.244 W: -.097	M: .84 W: .067	M: -.319 W: -.023	M: -.233 W: .088
Appreciate suggestions from others	M: -.003 W: -.160	M: .100 **W: .219**	M: -.136 W -.077	M: .135 W: -.091
Gender of those who make suggestions is important	M: -.172 W: .053	M: -.092 W: .096	M: -.082 W: -.140	M: -.249 W: .099
The sex of supervisor matters	M: -.141 W: .044	M: -.161 W: -.006	M: .035 W: .009	M: -.170 W: .082
I am more emotional than people of opposite sex	M: .207 W: .163	**M: .367** W: .174	M: -.049 W: .100	M: -.028 W: .105

Note. $n^M = 38$, $n^W = 107$. Significant correlations are indicated in boldface.

Supplementary Analyses

In addition to the main hypotheses, I examined other relationships that might provide insight into gender differences in self-talk. First, people who reported that they "appreciate suggestions and or corrections from others," were less likely to agree that the gender of the person making the suggestions/corrections matter" r (147) = -.295, p = .000. People who reported that they "appreciate suggestions and or corrections from others," were less likely to agree that the "gender of my supervisor matters," r (147) = -.228, p = .005. They also positively correlated to "I am more emotional than people of the opposite sex," r (147) = .170, p = .039.

I next examined correlations among the various supplementary items. In this case, people who rated themselves as more intelligent reported more pressure related to work performance, r (147) = .244, p = .003. People who considered themselves as more intelligent also reported more satisfaction on required tasks, r (147) = .173, p=.035.

CHAPTER V

DISCUSSION

The purpose of this study was to examine gender differences as they relate, either directly or indirectly, to intrapersonal communication. The first hypothesis stated that women would report more self-talk than men, overall, and there was good support for this. Women particularly reported more self-reinforcing self-talk, as well as overall self-talk. Self-reinforcing self-talk involves, according to Brinthaupt et al.'s (2009) STS, "feeling good or proud of something you have done." Self-reinforcement was also the only positive correlation in the STS and RSE data. Self-reinforcement was also the only positive correlation in the STS that had a positive and significant correlation on the survey item "I appreciate suggestions or corrections from others." I believe that women are very familiar with differences in gender and have history in experiencing aspects of them. Because of that, women may need to regularly remind themselves of who they are and what they have done in their lives. This might be one explanation for the results reported here.

One of the main factors that separates this group of participants is in age. With the mean age being almost double other studies in self-talk, it elevates age as a confounding variable in future self-talk research. What will be interesting to determine is whether men and women are both and equally affected by age. It is possible that age has a stronger effect on self-talk for women, compared to men. That could be the reason the self-talk scores for this group were significant in some ways, but not to the degree that the literature predicted.

In my second hypothesis I expected that women would report lower satisfaction levels in the areas of self-esteem, body image, and social assessment and higher frequencies of mental health history, and eating disorders, compared to men. The research literature indicates these are areas where gender differences are common, as I indicated in earlier sections. Even though there was not overall strong support for my hypothesis, there were interesting findings. In fact, women did score higher on the survey item "I use self-talk to help me feel good about my appearance." I also believe that the age of the participants may have had an effect with this hypothesis. I believe that many women, as they age, develop more confidence, and worry less about what other people think.

For my third hypothesis I predicted that women would show stronger correlations between STS and areas of self-esteem, mental health history, body image, eating disorders, and social assessment compared to men. There was minimal support for the hypothesis; however, important information was obtained. Women had a high correlation with the STS subcategory of self-management and the survey item, "I consider myself intelligent." Self-management is self-talk involving, according the Brinthaupt et al.'s (2009) STS, "giving oneself instructions or directions about what one should do or say or needing to figure out what one should do or say." Do women need to instruct themselves on their level of intelligence? For the same survey item, "I consider myself intelligent," all the male scores on the STS subcategories were negatively related to self-talk. All the women's scores were positively correlated to the STS. That suggests that when men were asked if they are intelligent, they knew they were, without using self-talk to remind, assess, or convince themselves. That may not be the case for women.

Additionally, the only time men's STS scores were significantly and positively correlated to the subcategory of self-reinforcement was with survey item "I consider myself to be more emotional than people of the opposite sex." Just as a reminder, self-reinforcement is feeling good or proud of something you have done. Interestingly, in the survey section on Emotional Intelligence, men's mean scores were almost the same as for women. In fact, men scored slightly higher in "I understand how I feel," "Emotions are an important aspect of my personality," and "I try to not show my emotions, even if I am aware of them." Once again, these results might reflect the older nature of my sample compared to past research on these topics.

The lack of statistical support for hypothesis three does not alter the fact that men in general have fewer and poorer skills in communication, compared to women, as well as some physical limitations that relate to hearing. Since self-talk is intrapersonal communication, some questions remain concerning the skill level that men have, not only in identifying types of self-talk, but of reporting their self-talk.

Implications for future research

There is a wide array of directions to go in when it comes to self-talk in general, as well as how gender relates to self-talk. While women did rate higher (not significantly), than men on "feeling shame for overeating," men also rated higher (not significantly) than women on "being disgusted by people who overeat." When I consider that the statistical differences in body image and eating disorders between men and women identified in past research, these findings suggest the need for further investigation of this topic.

Although lower self-esteem was associated with higher frequency in self-talk, I was surprised that men showed higher STS/esteem correlations in this survey, especially considering that the research indicates that men generally report higher levels of self-esteem than women. There are two thoughts that come to mind. Men generally have less social support than women do, and that lack of social support could cause a need for higher levels of self-talk. In this situation, self-talk would replace social interactions for men who have lower self-esteem. This information should be looked at more closely. In the literature review it was determined that having a social support system could raise anxiety levels for men. If there is a connection between these two findings, and researchers understood it more, it could be beneficial in finding solutions for the isolation men may feel.

My other thought is that men may be reporting higher levels of self-esteem in general as a type of unconscious coping mechanism, as coping mechanisms can help prevent people from thoughts that are painful or uncomfortable to realize. Because men are at a disadvantage when it comes to communication and relationship interactions, they may feel they have some level of deficit; thereby, exploiting areas where they do have high levels of confidence. It is possible that this could also be related to a general lack of support systems that many men experience.

Limitations of the Research

As with all research that depends on self-reports, this research is limited by the participant's understanding of themselves, and particularly for this study, of their own self-talk. For some participants self-talk may have been a familiar concept. However, for

others it may have been something they had never considered, and their familiarity with their self-talk would be limited.

Research indicates that there are some areas where there are significant gender differences. While the STS and the RSE are sound psychometric measures, the items created specifically for this study were limited by the skill level of me, the researcher. Because of that, some survey items may not have aided in surfacing areas where gender differences exist in self-talk.

This group of participants could also be considered a limiting factor. The majority of the respondents reported themselves as being white. With a more diverse group, the responses and scores could be different.

As I continue to explore the fascinating topic of gender differences in general, and in self-talk specifically, I hold on to the commonly held view that women are generally better at communications than men. Since self-talk is a type of communication, it is likely that women either engage in more frequent usage of self-talk, or they have better skills in communicating with themselves. Further research exploring these possibilities is warranted.

Closing Remarks

The hope is that this research will spark an interest in doing research in gender differences in self-talk in the future. Additionally, as research shines a light on the power of self-talk, both positive and negative, there will be better models of therapy and counseling developed that will help all individuals leverage the power of self-talk for their own well-being, as well as for the well-being of their relationships.

The desire of this research is that ultimately people would understand themselves better, as well as understand the people they live, work, worship, and interact with daily. Society is becoming more fractured and divided. Families are becoming more fractured and divided. Both genders bring a unique perspective and there is much that we can learn from each other. My hope is that sensitivity to self-talk and possible gender differences in it will contribute to our understanding of these broader issues.

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Appendix A - Self-talk Expanded Survey Items

1	I sometimes address or talk to myself using my own name.
2	I sometimes address or talk to myself using a personal pronoun (e.g., "you," “she,” “he,” or “they”).
3	I use self-talk as a form of self-control.
4	I talk more around other people when I get nervous.
5	Sometimes I start talking and lose the point of the conversation.
6	I actively listen to others when they are talking.
7	I feel like other people listen to me when I am talking.
8	I find it difficult to stop myself from talking when I am in social situations.
9	My self-talk helps me to resolve internal conflicts that I have.
10	My self-talk helps me to cope when I am experiencing strong negative emotions.

Appendix B - Mental Health History Survey Items

1	I often feel down, depressed, or hopeless.
2	I feel bad about myself (e.g., that you are a failure or have let yourself or your family down).
3	I feel I worry more about work, school, and relationships than people of the opposite sex do.
4	I have sleep troubles (e.g., falling or staying asleep or sleeping too much).
5	I use mood altering substances.
6	I experienced a lot of anxiety during the COVID pandemic.
7	The COVID pandemic and its effects have given me a chance to know myself better.
8	Have you ever had a major depressive episode?
9	Has a medical professional (e.g., doctor, psychologist, psychiatrist) ever diagnosed you with a type of anxiety disorder?
10	Do you currently take any prescribed anxiety medications?

Appendix C - Body Image and Relationship with Food Survey Items

1	I feel good about myself when I control what I eat.
2	I shame myself for eating too much.
3	I only feel good about myself when I am at an ideal body weight.
4	People who don't control themselves with food disgust me.
5	I think of my body as a friend.
6	I use self-talk to help me feel good about my appearance.
7	My concern over food and weight affects my relationships and social activities.
8	I make judgements about people based on what they eat.

Appendix D - Emotional Intelligence Survey Items

1	I understand how I am feeling most of the time.
2	I use my emotions to help me understand what is important to me.
3	My emotions are an important aspect of my personality.
4	When I am upset, I use my self-talk to help me calm down.
5	When I am upset, I cannot calm myself down.
6	I try to not show my emotions, even if I am aware of them.
7	I don't feel that others want to know what I'm feeling.
8	In my family, we never talk about emotions.
9	How I feel is not important.
10	What I am feeling is often confusing.

Appendix E - Social Interaction and Gender Comparison

1	I consider myself to be very intelligent.
2	I feel pressure related to my work or school performance.
3	I am satisfied with my work on required tasks.
4	In work or school environments, I appreciate work related suggestions or correction from others.
5	The gender of the people who make suggestions or correct me matters, especially when they are on the same level as me.
6	In a work setting, the sex of my direct supervisor matters to me.
7	What gender was the best boss you ever worked for?
8	You consider yourself to be more emotional than people of the opposite sex.

Appendix F - Demographics

1	What “gender” do you identify as?
2	What is your age?
3	Please specify your ethnicity:
4	Please choose all of the following occupations that apply to you.

Appendix G – IRB Approval

IRB
INSTITUTIONAL REVIEW BOARD
Office of Research Compliance,
010A Sam Ingram Building,
2269 Middle Tennessee Blvd
Murfreesboro, TN 37129
FWA: 00005331/IRB Regn.: 0003571

MIDDLE TENNESSEE STATE UNIVERSITY

IRBN007 – EXEMPTION DETERMINATION NOTICE

Tuesday, April 13, 2021

Protocol Title	***Exploring Gender Differences in Self-talk Content and Frequency***
Protocol ID	**21-1148 2q**
Principal Investigator	**Cynthia Torres** (Student)
Faculty Advisor	Thomas Brinthaupt
Co-Investigators	NONE
Investigator Email(s)	*cdt5u@mtmail.mtsu.edu; tom.brinthaupt@mtsu.edu*
Department/Affiliation	Psychology

Dear Investigator(s),

The above identified research proposal has been reviewed by the MTSU Institutional Review Board (IRB) through the **EXEMPT** review mechanism under 45 CFR 46.101(b)(2) within the research category ***(2) Educational Tests, surveys, interviews or observations of public behavior*** *(Qualtrics Survey)*. A summary of the IRB action and other particulars of this protocol are shown below:

IRB Action	**EXEMPT from further IRB Review** Exempt from further continuing review but other oversight requirements apply
Date of Expiration	4/30/2022 *Date of Approval:* **4/13/21** *Recent Amendment:* NONE
Sample Size	FIVE HUNDRED (500)
Participant Pool	**Healthy adults (18 or older)**
Exceptions	Online consent followed by internet-based survey using Qualtrics is permitted (Qualtrics links on file).
Type of Interaction	☐ Non-interventional or Data Analysis ☒ Virtual/Remote/Online Interview/survey ☐ In person or physical– Mandatory COVID-19 Management (refer next page)
Mandatory Restrictions	**1. All restrictions for exemption apply.** **2. The participants must be 18 years or older.** **3. Mandatory ACTIVE informed consent. Identifiable information including, names, addresses, voice/video data, must not be obtained.** **4. NOT approved for in-person data collection.**
Approved IRB Templates	*IRB Templates:* **Online Informed Consent and Recruitment Email** *Non-MTSU Templates:* **Verbal Recruitment/Invitation**
Research Inducement	NONE
Comments	**NONE**

Summary of the Post-approval Requirements: The PI and FA must read and abide by the post-approval conditions (Refer "*Quick Links*" in the bottom):

- ***Final Report:*** The Faculty Advisor (FA) is responsible for submitting a final report to close-out this protocol before 4/30/2022; if more time is needed to complete the data collection, the FA must request an extension by email. REMINDERS WILL NOT BE SENT. **Failure to close-out (or request extension) may result in penalties** including cancellation of the data collected using this protocol or withholding student diploma.
- ***Protocol Amendments***: IRB approval must be obtained for all types of amendments, such as:
  - Addition/removal of subject population and sample size.
  - Change in investigators.
  - Changes to the research sites – appropriate permission letter(s) from may be needed.
  - Alternation to funding.
  - Amendments must be clearly described in an addendum request form submitted by the FA.
  - The proposed change must be consistent with the approved protocol and they must comply with exemption requirements.
- ***Reporting Adverse Events:*** Research-related injuries to the participants and other events , such as, deviations & misconduct, must be reported within 48 hours of such events to compliance@mtsu.edu.
- ***Research Participant Compensation:*** Compensation for research participation must be awarded as proposed in Chapter 6 of the Exempt protocol. The documentation of the monetary compensation must Appendix J and MUST NOT include protocol details when reporting to the MTSU Business Office.
- ***COVID-19:*** Regardless whether this study poses a threat to the participants or not, refer to the COVID-19 Management section for important information for the FA.

COVID-19 Management

The FA must enforce social distancing guidelines and other practices to avoid viral exposure to the participants and other workers when physical contact with the subjects is made during the study.

- The study must be stopped if a participant or an investigator should test positive for COVID-19 within 14 days of the research interaction. This must be reported to the IRB as an "adverse event."
- The FA must enforce the MTSU's "Return-to-work" questionnaire found in Pipeline must be filled and signed by the investigators on the day of the research interaction prior to physical contact.
- PPE must be worn if the participant would be within 6 feet from the each other or with an investigator.
- Physical surfaces that will come in contact with the participants must be sanitized between use
- **FA's Responsibility:** The FA is given the administrative authority to make emergency changes to protect the wellbeing of the participants and student researchers during the COVID-19 pandemic. However, the FA must notify the IRB after such changes have been made. The IRB will audit the changes at a later date and the PI will be instructed to carryout remedial measures if needed.

Post-approval Protocol Amendments:

The current MTSU IRB policies allow the investigators to implement minor and significant amendments that would not result in the cancellation of the protocol's eligibility for exemption. ***Only THREE procedural amendments will be entertained per year*** *(changes like addition/removal of research personnel are not restricted by this rule).*

Date	Amendment(s)	IRB Comments
NONE	NONE.	NONE

Post-approval IRB Actions:

The following actions are done subsequent to the approval of this protocol on request by the PI or on recommendation by the IRB or by both.

Date	IRB Action(s)	IRB Comments
NONE	NONE.	NONE

Mandatory Data Storage Requirement:

All research-related records (signed consent forms, investigator training and etc.) must be retained by the PI or the faculty advisor (if the PI is a student) at the secure location mentioned in the protocol application. The data must be stored for at least three (3) years after the study is closed. Additionally, the Tennessee

State data retention requirement may apply (*refer "Quick Links" below for policy 129*). Subsequently, the data may be destroyed in a manner that maintains confidentiality and anonymity of the research subjects. **The IRB reserves the right to modify/update the approval criteria or change/cancel the terms listed in this notice.** Be advised that IRB also reserves the right to inspect or audit your records if needed.

Sincerely,

Institutional Review Board
Middle Tennessee State University

Quick Links:

- Post-approval Responsibilities: http://www.mtsu.edu/irb/FAQ/PostApprovalResponsibilities.php
- Exemption Procedures: https://mtsu.edu/irb/ExemptPaperWork.php
- MTSU Policy 129: Records retention & Disposal: https://www.mtsu.edu/policies/general/129.php