# The Effect of Gender Roles and Priming on Mental Health Self-Stigma and Attitudes

By

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Abstract

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Prior research suggests that gender roles and gender are both related to mental health self-stigma and attitudes toward help seeking. In the present study, I explored whether espousal of gender roles and priming people with mental health stigma would interact to predict levels of mental health self-stigma and attitudes toward help-seeking. I also tested whether gender moderated this relationship. Some participants were primed with fake Twitter posts that promoted mental health stigma, while others were exposed to neutral Tweets. All participants then responded to questionnaires assessing espousal of gender roles, levels of mental health self-stigma, attitudes toward help-seeking, and gender identity. Results indicated that the prime increased mental health self-stigma among men. Among women, the prime increased mental health self-stigma for low gender role espousal-participants, but there was no such effect among high-espousal participants. I found a similar result for attitudes toward help-seeking, although this effect did not reach traditional levels of significance. My findings suggest that people are highly sensitive to discussion of mental health stigma. This means that, as a result of having a conversation with a friend who emphasizes mental health stigma, someone's mental health self-stigma might increase and their attitudes toward help-seeking could become more negative.

# The Effect of Gender Roles and Priming on Mental Health Self-Stigma and Attitudes

Although mental health disorders are prevalent among adults in the United States, many people do not seek professional help. According to the National Institute of Mental Health (2020), about 51.5 million adults (aged 18 and above) experienced a mental health condition in the United States during 2019. Of those adults, only about 23 million (44.8%) received professional psychological help during 2019 (National Institute of Mental Health, 2020). There are several factors that might explain why fewer than half of the adults who experienced a mental health disorder sought treatment. One potential explanation could be issues of practicality, such as, but not limited to, lack of transportation and/or financial instability (Andrade et al., 2014). Moreover, a key reason behind failure to seek professional psychological help is often stigma surrounding mental health (Andrade et al., 2014). There are two main types of mental health stigma: public stigma and self-stigma (Corrigan & Rao, 2012). Public stigma is defined as "prejudice and discrimination" toward people with mental health disorders, while self-stigma is when people internalize these stereotypes and begin to believe that they are true (Corrigan & Rao, 2012, p.464).

## *Mental Health Stigma*

Prior research has explored the presence of mental health stigma among different groups of people. For example, Covarrubias and Han (2011) explored the stigma toward people with serious mental illness (SMI) present among Master of Social Work (MSW) students. 71 MSW students, 83.1% of whom were female, participated in the study in their last semester. The researchers were interested in the relationship between mental health stigma and several factors, including stereotypes about mental health. To operationalize mental health stigma, the researchers asked participants questions about whether they would restrict the rights of people

with SMI, as well as questions about their desire to distance themselves from those with SMI. Further, the researchers administered several questionnaires in order to measure participants' level of social contact with people with SMI, the stereotypes they held about mental health, and whether or not they believed that someone with SMI has the ability to recover. Results showed that having social contact with friends with SMI was related to lower desire for social distance, while more desire for social distance was associated with higher stereotypes of mental health. Further, individuals were more likely to state their desire to restrict the rights of, as well as distance themselves from, people with SMI if they held stereotypes that people with SMI were dangerous and that their SMI is what defines their identity. These results suggest that it might be important for people to have more exposure to the SMI population, since this factor was associated with lower levels of mental health-related stigma.

Another angle would be to explore additional factors related to mental health stigma. Zhao et al. (2015) explored how mental health self-stigma might be related to attachment styles and interpersonal relationships among adolescents. Participants included 115 Canadian high school students, ranging from 15 to 16 years old. 39 of the participants were male, 74 were female, and 2 did not disclose their gender. The researchers administered the Self-Stigma of Seeking Help (SSOSH) scale in order to measure mental health self-stigma held by participants (Vogel, Wade, & Haake, 2006). Further, Zhao et al. (2015) used other measures to learn about participants' desire to socially distance themselves from people with mental health concerns, as well as their attachment style, interpersonal relationships, self-esteem, and likelihood to conform to social desirability norms. Results showed that adolescents who perceived their attachment style to be secure and had strong relationships with peers had less mental health self-stigma and less desire to socially distance themselves from people with mental health concerns. However,

individuals whose parent was their go-to person had more of a desire to socially distance themselves from people with mental health concerns. Further, social desirability was positively related to self-esteem, and was negatively associated with having a supportive friend. These results imply that it is important for children to have strong relationships with peers and a strong attachment style, since these factors were correlated with lower amounts of mental health self-stigma.

Beyond identifying that different groups of people hold mental health stigma, a next step is to study interventions that aim to lower people's stigma. Knifton et al. (2010) researched mental health stigma and potential discrimination among black and ethnic minority (BME) communities in Scotland. Participants of their study included 257 individuals from BME communities, 73% of whom identified as female. As part of the study, these individuals engaged in 26 mental health workshops over a nine-week period, which discussed a variety of mental health-related topics, such as the different psychological disorders that exist and the stigma that surrounds them. Before and after completing the workshops, participants completed a survey to measure their "knowledge, attitudes, and [behavioral] intent" of mental health (Knifton et al., 2010, p.499). Results indicated that participants' level of mental health stigma was lower after completion of the workshops than before. Further, the researchers found that it was important for the workshops to acknowledge the participants' cultures in order for the participants to positively engage in the workshops. These results imply that it might be helpful to educate people about mental health, while taking the characteristics of different cultures into consideration, since this was related to lower levels of mental health stigma.

*Mental Health Stigma and Help-Seeking*

A next step is to explore whether the presence of mental health stigma is related to people's mental health-related decisions. Lannin et al. (2016) assessed whether self-stigma of mental health was associated with people's likelihood of researching mental health concerns and treatment options. 370 college students participated in this study, 61% of whom were female. The researchers used the SSOSH scale (Vogel et al., 2006) in order to measure mental health self-stigma held by participants. Additionally, Lannin et al. (2016) used the short form of the Attitudes Toward Seeking Professional Psychological Help (ATSPPH-SF) scale (Fischer & Farina, 1995) in order to measure participants' attitudes toward help-seeking. After the questionnaires were administered online, and the study was ostensibly complete, participants were given mental health information and resources. Results indicated that participants with higher levels of mental health self-stigma were less likely to seek information about mental health conditions and treatment options. Mental health self-stigma predicted attitudes toward counseling, while attitudes toward counseling predicted likelihood to seek information about mental health (Lannin et al., 2016). These results suggest that it might be important to teach people, from a young age, about mental health, since this factor was related to lower levels of mental health self-stigma and more positive attitudes toward mental health.

Beyond the association between mental health stigma and likelihood to seek mental health-related information, it is important to understand the relationship between mental health stigma and people's attitudes toward actually seeking mental health treatment. Masuda and Boone (2011) studied the potential relationship between mental health stigma, self-concealment, and help-seeking attitudes among Asian American and European American college students. Participants included 357 college students: 122 Asian Americans (80 of whom were female) and

235 European Americans (164 of whom were female). In order to measure attitudes toward help-seeking, the researchers used the ATSPPH scale (Fischer & Turner, 1970), which is the longer, and original, version of the measure used by Lannin et al. (2016; Fischer & Farina, 1995). This questionnaire was used to assess participants' help-seeking attitudes. Masuda and Boone (2011) administered two additional questionnaires in order to measure mental health stigma (i.e. negative attitudes) and self-concealment (i.e. tendency to not tell others about personal information that might be viewed negatively). Results indicated that females had more positive attitudes toward help-seeking, including "greater recognition of need and greater confidence in mental health practitioners" than men (Masuda & Boone, 2011, p.272). Moreover, among both the Asian American and European American groups, mental health stigma and self-concealment were both negatively correlated with attitudes toward help-seeking overall. Thus, regardless of race, there was a relationship between mental health stigma, self-concealment, and help-seeking attitudes. These findings suggest that it might be important for there to be less mental health stigma and for people to be more willing to confide in others about their thoughts and feelings, since these factors were related to more positive attitudes toward help-seeking and higher likelihood of seeking professional help.

Other researchers have also studied how mental health stigma is associated with people's willingness to seek out treatment. Jennings et al. (2015) explored the relationship between the stigma surrounding seeking professional help, self-reliance of coping, and seeking treatment among college students. 246 college students participated in this study, 74.7% of whom were female. The researchers used the SSOSH scale (Vogel et al., 2006) in order to measure mental health self-stigma. Moreover, Jennings et al. (2015) used several other questionnaires to measure perceived stigma of seeking help, attitudes toward seeking professional treatment, and

self-reliance of coping with mental health concerns (i.e. likelihood of someone dealing with their problems on their own), as well as past experiences with treatment. Additionally, the researchers used several different measures to inquire about the participants' history of experiencing issues, such as depression or alcohol-related problems. Results indicated that a more negative attitude toward seeking treatment was related to higher levels of mental health self-stigma, perceived stigma, and self-reliance. These results imply that it is important to educate people on mental health, since this factor was related to lower levels of mental health stigma, higher levels of comfort in talking about feelings with others, and higher likelihood of seeking professional help.

*Women, Mental Health Stigma, and Help-Seeking*

Clearly, then, a wealth of research has demonstrated a relationship between mental health stigma and attitudes toward seeking treatment. To what extent is this association moderated by gender? Beginning with women, Hom et al. (2018) studied mental health stigma and professional mental health treatment among women firefighters who experienced suicidal feelings during their careers. Participants included 119 current women firefighters in the United States who reported being suicidal. In order to measure mental health self-stigma, the researchers used the SSOSH scale (Vogel et al., 2006). Additionally, Hom et al. (2018) administered several questionnaires in order to gather demographic information, as well as learn about the participants' mental health treatment history, past experiences with suicidality (i.e. thoughts, plans), perceived stigma around mental health, and barriers to mental health treatment. At the completion of the surveys, the researchers provided participants with mental health resources. Concerns about mental health stigma (i.e. being treated differently by others) were the most common "hypothetical barriers to care" that participants indicated (Hom et al., 2018, p.316). Interestingly, though, mental health self-stigma was not significantly correlated with

seeking psychological treatment. These results suggest that mental health public stigma, as opposed to self-stigma, might be related to people's willingness to engage in psychological treatment.

Other research has also explored factors related to women's mental health. Zalat, Mortada, and Seifi (2019) assessed the differences in mental health stigma and help-seeking attitudes between working and non-working Egyptian women. Participants included 240 Egyptian women, 115 of whom worked at various private schools and 125 of whom were not working and were enrolled in outpatient programs. The researchers administered several questionnaires in order to assess whether participants were experiencing mental health disorders, the stigma that participants held about mental health, and the attitudes that participants had toward seeking professional help, as well as demographic information. Results indicated that working women had more positive attitudes about help-seeking, more mental health conditions, and less mental health stigma than did non-working women. Moreover, among both groups, personal mental health stigma and social support were the primary factors that predicted participants' attitudes toward help-seeking. These results imply that it might be especially important to educate people who do not have mental health conditions, since they tend to have more mental health stigma and less favorable attitudes toward help-seeking, as compared to people who suffer with mental health conditions.

Yet another study that examined women's experiences with mental health stigma was conducted by Nadeem et al. (2007). These researchers examined the extent to which mental health stigma explains why low-income immigrant and United States-born black and Latina women underuse mental health services. Participants included 15,383 low-income women who went through depression screening. The researchers asked participants questions in order to

understand their level of mental health stigma, logistical barriers to receiving professional help, and interest in receiving psychological treatment, as well as demographic characteristics. All questionnaires were administered orally, either in English or Spanish, depending on which language the participant was most comfortable speaking. Results indicated that among women with depression, immigrant women were more likely to express concerns about mental health stigma than United States-born white women. Additionally, immigrant African women, immigrant Caribbean women, United States-born black women, and United States-born Latina women were all less likely to want treatment than were United States-born white women. Based on these results, it is critical to keep someone's culture, and whether or not they are an immigrant, in mind when considering their experiences with mental health stigma and when inquiring about their desire for psychological treatment.

*Men, Mental Health Stigma, and Help-Seeking*

Similarly to the previous studies on women, researchers have studied mental health stigma held by men. DeBate, Gatto, and Rafal (2018) used the Information-Motivation-Behavioral Skills model to understand why college men utilize counseling services at a low rate. The researchers sampled 1,242 college men from the University of South Florida. In order to assess mental health self-stigma, the researchers used a modified version of the SSOSH scale (Vogel et al., 2006). Further, DeBate et al. (2018) combined several different measures in order to assess information (i.e. knowledge about mental health) and behavioral skills (i.e. intention to seek care for various behavioral and mental health issues). Moreover, in order to assess motivation, the researchers administered the ATSPPH-SF scale (Fischer & Farina, 1995) in order to measure attitudes toward seeking treatment for mental health concerns. Results showed positive correlations between information and motivation,

information and behavioral skills, and motivation and behavioral skills (Debate et al., 2018). Further, mental health stigma mediated all three of these relationships. These findings suggest that information, motivation, behavioral skills, and mental health stigma are all connected. Thus, when considering mental health stigma, it is important to keep the factors of information, motivation, and behavioral skills in mind.

Other studies have also explored mental health stigma among men, but with a focus on gender norms. Specifically, Vogel et al. (2011) studied the relationship between gender norms, mental health self-stigma, and attitudes toward seeking help among men from "diverse backgrounds" (p.368). Participants included 4,773 men, with a mean age of 32.9 years. The researchers used the SSOSH scale (Vogel et al., 2006) to measure mental health self-stigma and used the ATSPPH-SF scale (Fischer & Farina, 1995) in order to measure attitudes toward help-seeking. Further, Vogel et al. (2011) used additional questionnaires to measure participants' "conformity to dominant masculine gender norms," as well as whether or not they experienced depression (p.372). The authors used path-analysis modeling to provide evidence consistent with the causal claim that depression directly affected attitudes toward help-seeking. Moreover, depression had an indirect effect, such that depression predicted mental health self-stigma, which then predicted attitudes. Similarly, masculinity had a direct effect on attitudes toward help-seeking, as well as an indirect effect, such that masculinity predicted mental health self-stigma, which then predicted attitudes. These results imply that depression and masculinity are both related to mental health self-stigma and attitudes toward help-seeking. Thus, when discussing mental health stigma among men, as well as men's attitudes toward help-seeking, it might be important to consider the concept of masculinity.

In addition to Vogel et al. (2011), other researchers have studied how gender norms are related to mental health stigma among men. Cole and Ingram (2020) studied gender norms and mental health self-stigma as predictors of men's likelihood to engage in professional treatment for their depression. Participants included 313 college men. The researchers used the SSOSH scale (Vogel et al., 2006) in order to measure mental health self-stigma. Further, Cole and Ingram (2020) used another questionnaire to assess gender role conflict that the participants experienced. Results indicated that gender role conflict was positively correlated with mental health self-stigma. Further, mental health self-stigma was a predictor of lower amounts of social support, less utilization of psychological treatment, and increased avoidant behaviors. These results suggest that when discussing mental health stigma and use of professional psychological services among men, it is important to keep in mind the role of gender norms.

*Gender Differences in Mental Health Stigma and Help-Seeking*

While it is interesting to explore mental health stigma among women and men individually, we must consider both genders in a single study in order to identify potential differences between them. Juvrud and Rennels (2017) did not study mental health stigma at all, but rather how men and women differed in help-seeking behaviors while completing puzzles, as well as how these differences were related to gender stereotypes. 140 undergraduate students participated in this study, including 68 women and 72 men. Participants completed four different puzzles tasks, each with a different objective and set of rules. The researcher told the participants that he knew the solutions to the puzzles and could offer help if they chose to ask for it. After the participants completed all four tasks, they answered three questions for each task, using a Likert-type scale for their ratings. These questions dealt with which gender the participants thought each task was meant for, the difficulty of each task, and whether or not they

had previously completed the task. Further, the participants responded to two questionnaires: one that assessed previous health help-seeking behaviors and one about gender-typed behaviors and qualities that they display. Results indicated that, for the puzzle tasks, men's help-seeking behaviors were predicted by both attitudinally endorsed gender stereotypes (OAT-AM) and personally endorsed stereotypes (OAT-PM), whereas women's help-seeking behaviors were only predicted by OAT-PM. Moreover, in terms of health help-seeking history, men's help-seeking behaviors were predicted by OAT-PM, while women's help-seeking behaviors were not predicted by gender stereotypes at all. These findings imply that, in some cases, help-seeking behaviors are highly influenced by gender stereotypes.

Beyond general help-seeking behaviors, a next step is to evaluate gender differences in willingness to seek help for mental health concerns. Chandra and Minkovitz (2006) explored this relationship among teenagers. Participants included 274 eighth grade students (138 boys and 136 girls) from two different middle schools. The researchers administered a variety of questionnaires in order to measure participants' demographic variables, level of social support, mental health stigma, experience with mental health concerns, and knowledge about mental health. Additionally, the researchers presented participants with a scenario in which one of their friends was dealing with a mental health-related issue. Participants were instructed to respond with what they would do first if their friend confided in them, as well as whether or not they thought that the issue was related to mental health. Similarly, participants were presented with a scenario where they were personally dealing with a mental health-related issue and were told to respond with how willing they would be to utilize mental health support services. Results indicated that girls had more knowledge about, and experiences with, mental health than did boys. Further, girls were much more likely than boys to express likelihood of participating in

mental health support. These results imply that there might be a connection between mental health knowledge, experience, and willingness to seek treatment. This is an important relationship to consider when dealing with mental health stigma, particularly among teenagers.

Other researchers have also studied gender differences in mental health stigma and attitudes toward help-seeking, but among participants who are slightly older. Specifically, Topkaya (2014) assessed the relationship between gender, mental health self-stigma, public-stigma, and attitudes toward seeking psychological help. Participants included 362 total undergraduates: 218 women, 95 men, and 49 people who did not report their gender. The researchers used a couple different measures in order to assess demographic characteristics and social mental health stigma. Additionally, participants completed the SSOSH scale (Vogel et al., 2006), which assessed mental health self-stigma, as well as the ATSPPH-SF scale (Fischer & Farina, 1995) to measure attitudes toward help-seeking. Results showed that gender and mental health self-stigma both predicted attitudes toward help-seeking, but public mental health stigma was not a predictor of help-seeking attitudes. Moreover, men were more likely to report both self-stigma and public stigma of mental health than women were. These results suggest the importance of educating people about mental health from a young age, since this was related to lower levels of mental health stigma and more positive attitudes toward psychological help-seeking.

*The Present Study*

Prior research shows that there is an association between high levels of mental health stigma and negative attitudes toward help-seeking (Jennings et al., 2015). Additionally, gender roles and gender are both related to levels of mental health stigma and attitudes toward seeking psychological treatment (Vogel et al., 2011; Cole & Ingram, 2020; Topkaya et al., 2014). Based

on these associations, in the present study, I showed fake Twitter posts to participants, with around half of the participants being exposed to posts that referred to mental health negatively (prime condition) and the other half of participants being exposed to neutral Tweets (non-prime condition). I then examined the levels of mental health self-stigma and attitudes toward help-seeking of both men and women, based on whether or not they believe in traditional gender roles, and whether or not they were primed with mental health stigma. I hypothesized that there will be a main effect of Tweet manipulation, such that people who received the high mental health stigma Tweets will have more mental health stigma and more negative attitudes toward help-seeking overall, as compared to the control condition. Additionally, I predicted a main effect of gender, such that males will have more mental health stigma and more negative attitudes toward help-seeking overall, as compared to females. Lastly, I hypothesized a three-way interaction, such that among females, higher espousal of gender roles will predict less mental health stigma and more positive attitudes toward help-seeking. Conversely, I predicted that among males, lower espousal of gender roles will predict less mental health stigma and more positive attitudes toward help-seeking.

## Method

### Participants

186 individuals originally participated in this study and were recruited through Amazon Mechanical Turk. Data from nine participants were incomplete so they were removed from the sample. Additionally, one person did not disclose their gender, which was a key factor in this study, so they were removed as well. Thus, 176 participants were considered for data analysis. Of this final group of participants, 57 identified as female and 119 identified as male. The mean age of participants was 37.19 years old. 119 participants have not seen a mental health

practitioner, 53 have seen a mental health practitioner, and 4 did not disclose whether or not they have seen a mental health practitioner. Further, 138 participants have not been diagnosed with a mental health disorder, 36 participants have been diagnosed with a mental health disorder, and two participants did not disclose whether or not they have been diagnosed with a mental health disorder.

**Materials**

*Gender Roles*

The Personal Attributes Questionnaire (PAQ) was originally developed by Spence, Helmreich, and Stapp (1974). Later, Helmreich, Spence, and Wilhelm (1981) developed the Expressive (E) subscale of the PAQ, which was a group of items that all assessed expressiveness. In the present study, five items from the E subscale were used to measure the extent to which participants espoused traditional gender roles of femininity. The five items that were selected were those that did not overlap with other questionnaires explained by Spence and Buckner (2000). Participants were asked to determine whether different traits from the E subscale represented the typical man or woman, in order to measure participants' belief in traditional gender stereotypes (Spence & Buckner, 2000). Sample items included the extent to which "aware of others' feelings" and "emotional" describe the typical man or woman. Responses to each item were rated on a four-point scale in which 1=*woman much more than man* and 4=*man much more than woman.* Spence and Buckner (2020) instructed their participants to rate responses on a five-point scale, but I mistakenly omitted the middle value. This error might have been beneficial, such that it forced participants to take a side, instead of succumbing to social pressure and selecting the neutral option, even if it did not align with their own beliefs. The five

items were correlated ($\omega = 0.81$), such that the measure manifested acceptable internal reliability. See **Appendix A** for the questionnaire that was used in the present study.

*Twitter Posts*

Participants were randomly assigned to one of two conditions: high mental health stigma Tweets (prime condition) or neutral Tweets (non-prime condition). There were ten fake Tweets in each condition, with five neutral tweets being the same across the two conditions. All fake Tweets were created under the name Emily Jones, with username @ejones148, and a cartoon of the sun as the profile picture. Examples of Tweets in the high mental health stigma condition included "I was complaining to my mom about how I constantly feel worried. She thinks I might have anxiety. Anxiety is a myth though… I'm just #stressed *weary face emoji*" and "My friend is feeling sad again today. It's not 'depression' or 'bipolar' - those aren't real! STOP WHINING! *goofy face emoji.*" See **Appendix B** for the Tweets that were presented to participants in the prime condition. A couple of Tweets in the neutral condition were "Really don't want to do my homework #procrastinationnation *yellow notebook emoji*" and "My parents and I ordered sushi for dinner earlier! Yum! *sushi emojis.*" See **Appendix C** for the Twitter posts that were shown to participants in the non-prime condition.

After reading the Twitter posts, regardless of which condition participants were assigned to, they were asked to respond to four questions regarding their opinions of the posts and the author of the posts. The purpose of including these questions was so that participants did not realize that the Twitter posts served as a prime. Two of the questions asked participants about their opinions of the posts and the author. Responses for these items were on a five-point scale in which 1=*very negative* and 5=*very positive.* A sample item included "What is your overall opinion of the Twitter posts?" The other two questions asked participants how interesting they

found the Twitter posts, as well as the author. Responses for these items were on a five-point scale, where 1=*very boring* and 5=*very interesting*. A sample item included "Based on the tweets, how interesting do you think the author is as a person overall?" See **Appendix D** for the questions that participants were asked.

*Self-Stigma of Mental Health*

In order to measure self-stigma of mental health, the Self-Stigma of Seeking Help (SSOSH) scale (Vogel et al., 2006) was used. This questionnaire consisted of ten different items, all geared toward assessing whether or not participants' self-esteem would be impacted by their decision to seek psychological help. Sample items included "If I went to a therapist, I would be less satisfied with myself" and "My view of myself would not change just because I made the choice to see a therapist." Responses for each item were on a five-point scale in which 1=*strongly disagree* and 5=*strongly agree*. Five of the items were reverse-coded, such that higher scores reflected more mental health self-stigma (i.e. seeking psychological help would damage one's self-esteem). The scale manifested acceptable internal reliability ($\omega = 0.89$). See **Appendix E** for the questionnaire that I used in this study.

*Attitudes Toward Help-Seeking*

The 29-item Attitudes Toward Seeking Professional Psychological Help (ATSPPH) scale was originally developed by Fischer & Turner (1970). The present study utilized the short form of this measure (ATSPPH-SF; Fischer & Farina, 1995). This 10-item measure assessed participants' attitudes toward seeking psychological help. I revised the eighth item from "Considering the time and expense involved in psychotherapy, it would have doubtful value for a person like me" to "Therapy is timely and expensive; it would not be of value for me." I made this change in order to make the item more clear. Sample items included "The idea of talking

about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts" and "I might want to have psychological counseling in the future." Responses for each item were rated on a four-point scale in which 1=*agree* and 4=*disagree*. Five of the items were reverse-coded, so that higher scores reflected more negative attitudes toward psychological help-seeking. The scale manifested acceptable internal reliability ($\omega = 0.75$). See **Appendix F** for the questionnaire that was used in this study.

*Demographics*

Participants were asked to identify their gender, age, whether or not they have ever seen a mental health practitioner, and whether or not they have ever been diagnosed with a mental health disorder. See **Appendix G** for the exact demographic questions that participants were asked to answer.

**Procedure**

After clicking on the study in Amazon Mechanical Turk, participants completed an informed consent form (see **Appendix H**). Upon agreeing to engage in the study, participants completed items from the E subscale of the PAQ (Helmreich et al., 1981; Spence & Buckner, 2020). Then, participants were randomly assigned to read Twitter posts in one of two conditions: high mental health stigma Tweets (prime condition) or neutral Tweets (non-prime condition). After reading the Tweets, participants in both conditions responded to four questions relating to their opinions of the content of the Tweets, as well as the author of the Tweets. Next, participants completed the SSOSH scale (Vogel et al., 2006), as well as the ATSPPH-SF scale (Fischer & Farina, 1995). Participants then answered demographic questions and read a debriefing statement (see **Appendix I**).

## Results

*Data*

First, I added each participant's five gender role scores in order to produce a total gender role espousal score for each participant. Then, I calculated the median of the total gender role espousal scores among all of the participants. Individuals who scored above the median total score were regarded as having "low espousal of traditional female gender norms," and individuals who scored below the median were regarded as having "high espousal of traditional female gender norms." Additionally, I calculated a total score for each participant for mental health self-stigma, as well as for attitudes toward help-seeking.

*Self-Stigma of Mental Health*

Mental health self-stigma scores were submitted to a condition (prime, non-prime) x gender role espousal (high, low) x gender (female, male) analysis of variance (ANOVA). There was a main effect of condition, $F(1,168) = 4.27$, $p = 0.04$, such that participants in the prime condition ($M = 25.14$) had higher mental health self-stigma scores than those in the non-prime condition ($M = 22.55$). There was a main effect of gender roles, $F(1,168) = 42.16$, $p < 0.001$, such that low-espousal participants ($M = 27.91$) had higher mental health self-stigma scores than high-espousal participants ($M = 19.77$). There was no main effect of gender, $F(1,168) = 0.13$, $p = 0.72$, such that women ($M = 24.07$) and men ($M = 23.61$) had equivalent mental health self-stigma scores.

These main effects were qualified by a condition x gender role espousal interaction, $F(1,168) = 6.21$, $p = 0.01$. However, there was no condition x gender interaction, $F(1,168) = 0.21$, $p = 0.64$, and no gender role espousal x gender interaction, $F(1,168) = 0.22$, $p = 0.64$. Importantly, all these effects were moderated by a three-way condition x gender role espousal x

gender interaction, $F(1,168) = 7.20$, $p = 0.01$. See **Figure 1.1** for the interaction among men and **Figure 1.2** for the interaction among women.

**Figure 1.1**

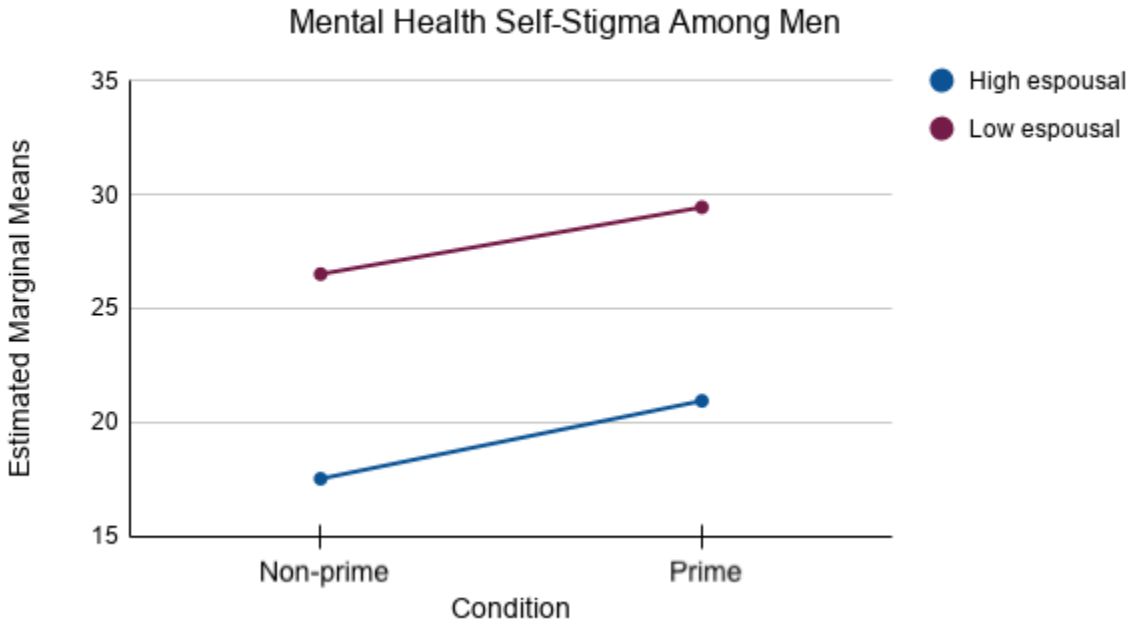
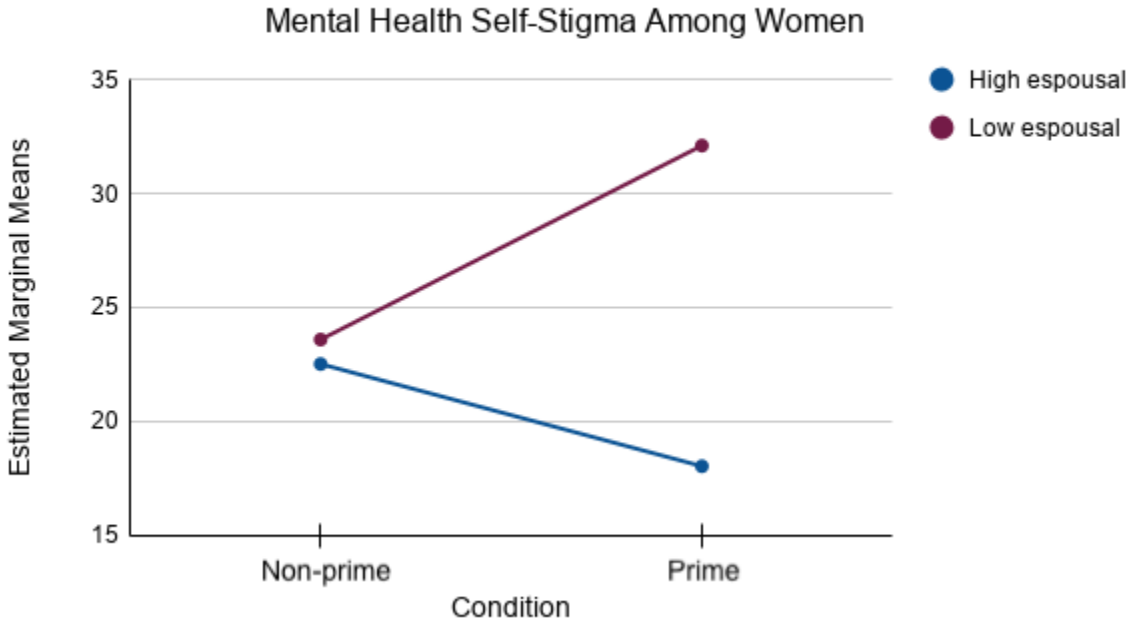



**Figure 1.2**



To understand what this three-way interaction means, I decomposed it into a two-way interaction for men and a two-way interaction for women. Among men, there was a main effect of condition, $F(1,115) = 5.05$, $p = 0.03$, such that participants in the prime condition ($M = 25.20$) had higher mental health self-stigma scores than those in the non-prime condition ($M = 22.03$). There was also a main effect of gender role espousal, $F(1,115) = 38.24$, $p < 0.001$, such that low-espousal participants ($M = 27.98$) had higher mental health self-stigma scores than high-espousal participants ($M = 19.25$). However, there was no interaction between the two variables, $F(1,115) = 0.03$, $p = 0.86$.

I then ran the two-way interaction just for women. Among women, there was no main effect of condition, $F(1,53) = 0.95$, $p = 0.34$, such that participants in the prime condition ($M = 25.08$) and those in the non-prime condition ($M = 23.07$) had equivalent mental health self-stigma scores. There was, however, a main effect of gender role espousal, $F(1,53) = 13.38$, $p = 0.001$, such that low-espousal participants ($M = 27.85$) had higher mental health self-stigma scores than high-espousal participants ($M = 20.29$). More importantly, these effects were qualified by a condition x gender role espousal two-way interaction, $F(1,53) = 9.86$, $p = 0.003$. To further decompose this interaction, I assessed whether the effect of condition on mental health self-stigma differed for high-espousal participants and low-espousal participants. Among high-espousal participants, there was no effect of condition on mental health self-stigma, $t(24.77) = 1.70$, $p = 0.10$, such that participants in the prime condition ($M = 18.05$) and those in the non-prime condition ($M = 22.53$) had equivalent mental health self-stigma scores. On the other hand, among low-espousal participants, there was an effect of condition on mental health self-stigma, $t(14.90) = -2.72$, $p = 0.02$, such that participants in the prime condition ($M = 32.10$) had higher mental health self-stigma scores than those in the non-prime condition ($M = 23.60$).

*Attitudes Toward Help Seeking*

I submitted attitudes toward help-seeking to a condition (prime, non-prime) x gender role espousal (high, low) x gender (female, male) ANOVA. There was no main effect of condition, $F(1,168) = 0.39$, $p = 0.53$, such that participants in the prime condition ($M = 22.62$) and those in the non-prime condition ($M = 22.10$) had equivalent attitude scores. There was a main effect of gender role espousal, $F(1,168) = 30.40$, $p < 0.001$, such that low-espousal participants ($M = 24.68$) had more negative attitudes than high-espousal participants ($M = 20.04$). There was no main effect of gender, $F(1,168) = 0.37$, $p = 0.55$, such that men ($M = 22.11$) and women ($M = 22.62$) had equivalent attitude scores.

There was no interaction between condition and gender role espousal, $F(1,168) = 1.71$, $p = 0.19$. There was also no interaction between condition and gender, $F(1,168) = 0.44$, $p = 0.51$. Further, there was no interaction between gender role espousal and gender, $F(1,168) = 1.34$, $p = 0.25$. There was, however, a marginal three-way condition x gender role espousal x gender interaction, $F(1,168) = 2.87$, $p = 0.09$. See **Figure 2.1** for the interaction among men and **Figure 2.2** for the interaction among women.

**Figure 2.1**

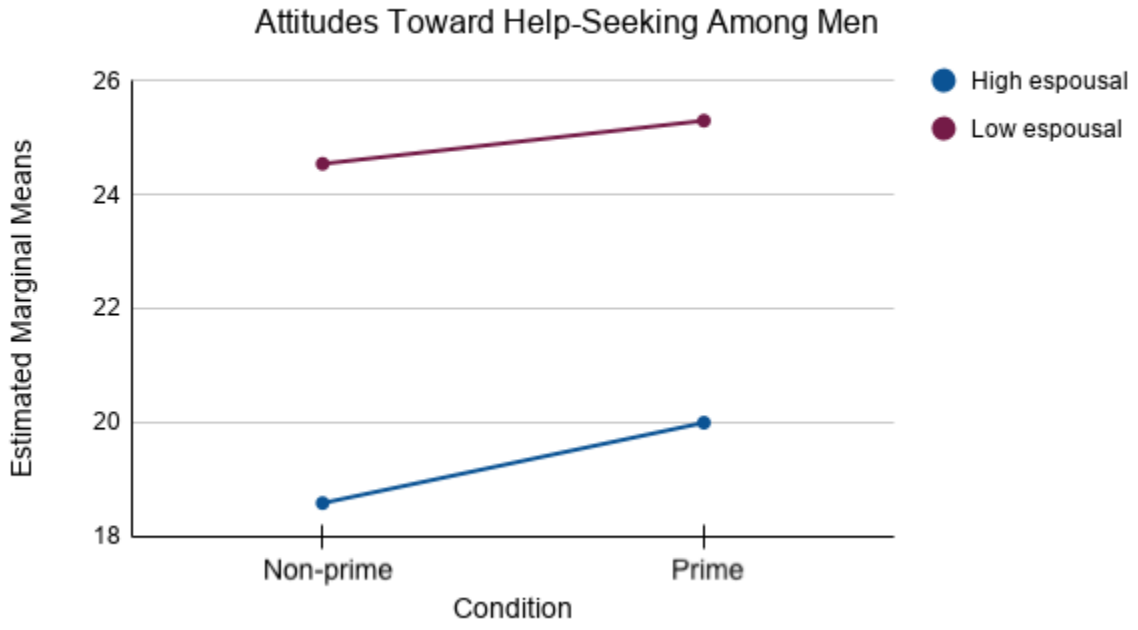
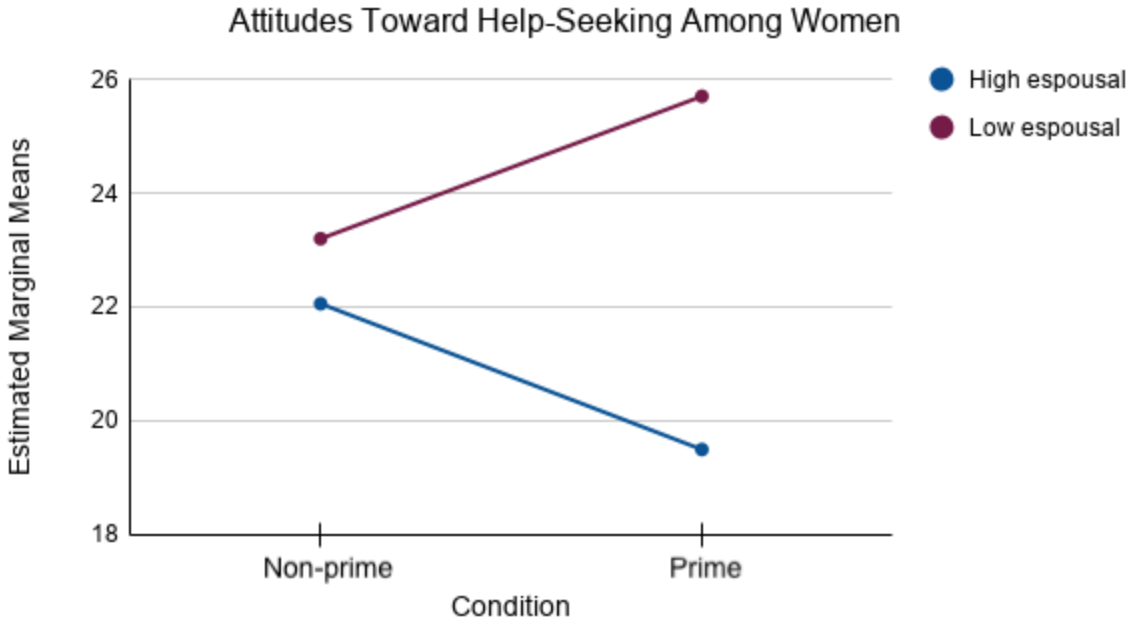


**Figure 2.2**




To decompose this interaction, I compared men and women. First, I submitted attitude scores to a condition x gender role espousal ANOVA for men only. There was no main effect of condition, $F(1,115) = 1.39$, $p = 0.24$, such that participants in the prime condition ($M = 22.65$) and those in the non-prime condition ($M = 21.57$) had equivalent attitude scores. There was a main effect of gender role espousal, $F(1,115) = 37.39$, $p < 0.001$, such that low-espousal participants ($M = 24.92$) had more negative attitudes than high-espousal participants ($M = 19.30$). There was no interaction between condition and gender role espousal, $F(1,115) = 0.13$, $p = 0.72$.

I then submitted attitude scores to a condition x gender role espousal ANOVA for women only. There was no main effect of condition, $F(1,53) = 0$, $p = 0.98$, such that participants in the prime condition ($M = 22.60$) and those in the non-prime condition ($M = 22.63$) had equivalent attitude scores. There was a main effect of gender role espousal, $F(1,53) = 6.18$, $p = 0.02$, such that low-espousal participants ($M = 24.45$) had more negative attitudes than did high-espousal

participants ($M = 20.78$). This was moderated by a marginal two-way condition x gender role espousal interaction, $F(1,53) = 2.93$, $p = 0.09$. To decompose this interaction, I assessed whether the effect of condition on attitudes differed for high-espousal participants and low-espousal participants. Among high-espousal participants, there was no effect of condition on attitudes, $t(35) = 1.31$, $p = 0.20$, such that participants in the prime condition ($M = 19.50$) and those in the non-prime condition ($M = 22.06$) had equivalent attitude scores. But, among low-espousal participants, the effect of condition on attitudes approached significance, $t(18) = -1.44$, $p = 0.12$, such that participants in the prime condition ($M = 25.70$) had scores that were more negative enough than those in the non-prime condition ($M = 23.20$) to yield a marginal two-way interaction.

## Discussion

Based on previous research, gender roles and gender are related to mental health self-stigma and attitudes toward help-seeking (Vogel et al., 2011; Topkaya et al., 2014). The current research explored whether espousal of traditional gender roles, as well as priming people with mental health stigma, would interact to predict their levels of mental health self-stigma and their attitudes toward help-seeking. I was also interested in whether gender moderated this relationship.

I showed fake Twitter posts to all participants, with around half of the participants being exposed to high mental health stigma Tweets (prime condition), and the remaining participants being shown neutral Tweets (non-prime condition). I also assessed participants' espousal of traditional female gender roles, levels of mental health self-stigma, and attitudes toward help-seeking. Further, I asked participants demographic questions, mainly in order to learn their gender.

Results indicated that there was a main effect of condition for mental health self-stigma, such that participants in the prime condition had higher mental health self-stigma scores than those in the non-prime condition. However, there was no main effect of condition for attitudes toward help-seeking. Additionally, there was no main effect of gender for either mental health self-stigma or attitudes toward help-seeking. Further, there was a three-way interaction for mental health self-stigma, and a marginal three-way interaction for attitudes toward help-seeking. Among women, low-espousal participants had higher mental health self-stigma scores, and more negative attitudes toward help-seeking, than did high-espousal participants. Among men, however, low-espousal participants actually had higher mental health self-stigma, and more negative attitudes toward help-seeking, than did high-espousal participants.

**Implications**

My research suggests that, in many cases, priming people with mental health stigma can influence their levels of mental health self-stigma and their attitudes toward help-seeking, which is novel because an experimental manipulation, such as this, had not been done before in a mental health stigma study. This finding can be used to guide mental health stigma research because, even people who identify as having positive attitudes about mental health, might actually be influenced by a mental health stigma prime, such as the fake Twitter posts that I used in the present study.

There is also a practical implication of my research, such that these results show how detrimental the influence of society is on people's level of mental health self-stigma, as well as their attitudes toward help-seeking. As a result of being exposed to just five Twitter posts that negatively portrayed mental health, participants had more mental health self-stigma and more negative attitudes toward help-seeking. Thus, it is conceivable that this finding is generalizable

to everyday society, meaning that people are highly susceptible to the views and conceptions of others. For instance, consider someone who has a mental health condition (and low mental health self-stigma and positive attitudes toward help-seeking), but has a friend who openly stigmatizes mental health and voices their negative attitudes toward help-seeking. This could lead to the person who is struggling with their mental health to avoid seeking treatment, due to the negative comments that their friend makes.

**Limitations**

One possible limitation of the present study is that the author of the fake Twitter posts' first name was Emily, which is typically a female's name. Since this study explored the role of gender and gender roles in predicting mental health self-stigma and attitudes toward help-seeking, the author's name should have been a more gender neutral name, such as Alex or Sam. Since Emily is typically a female's name, people might have responded to the prime the way that they did based on gender stereotypes, either consciously or subconsciously. It is conceivable that people who regard women as being emotional and being in favor of therapy might have been particularly triggered by the Twitter posts, since they violate their views of a typical woman. Thus, if I had used a gender neutral name for the author of the posts, it is possible that I would have found a main effect of condition in places where it is currently nonsignificant. If I were to conduct this study again, I would use a gender neutral name for the author of the posts, and be sure to keep a neutral profile picture, so as to not potentially influence the participants' responses.

Another limitation was that the majority of participants were men. This was not due to any shortcoming of my method planning; it simply occurred because Mechanical Turk skews male. Regardless, in a study that explored gender and gender roles, it would have been useful if

roughly half of the sample identified as women, and the other half identified as men. It is possible that the results would have been different if the split of genders had been more even. For instance, it is conceivable that gender would have moderated the effects if the sample had been more evenly split. Additionally, since the gender role questionnaire assessed espousal of traditionally female gender roles, it is conceivable that women would respond differently than men, due to their own personal experiences, which means the split might have been different if more women had participated in the study.

**Directions for Future Research**

One potential route for future research would be to conduct the same study among college students. In the college student population, mental health stigma is even more apparent than it is among older adults. Thus, it would be interesting to see if the results of the present study would be different among college students. I hypothesize that college students would have lower espousal of traditional gender norms than older adults. This is because college students, particularly those in the United States, are growing up in a society in which gender norms are less apparent than they used to be. Additionally, I predict that college students would be even more affected by condition than older adults were. This is due to the fact that college students are particularly susceptible to peer pressure. Often, when a college student is told something negative about mental health by their friend, that makes them less likely to engage in psychological treatment. Thus, I hypothesize that a similar effect would be found in an experimental setting.

Another possible direction for future research would be to conduct the present study again, keeping the prime conditions, gender moderator, and mental health self-stigma and attitudes toward help-seeking dependent variables the same. But, the key difference would be to

switch gender role espousal with another factor, such as whether or not the participants themselves have experienced a mental health disorder. I would hypothesize that participants who have experienced a mental health condition would have less mental health self-stigma and more positive attitudes toward help-seeking than those who have not experienced a mental health concern. This is due to the fact that many people with mental health disorders have sought treatment before, and might have had positive experiences doing so. Thus, people with mental health conditions might have more positive attitudes toward help-seeking than those who do not have a mental health disorder.

**Conclusion**

Many studies have explored factors relating to mental health self-stigma and attitudes toward help-seeking, such as gender and gender roles. My research added to this pre-existing body of literature by introducing an experimental manipulation, such that half of the participants were exposed to fake high mental health stigma Twitter posts, that served as a prime of mental health stigma, while the other participants read neutral Tweets. Results indicated that, generally speaking, this manipulation to different conditions did, indeed, influence participants' mental health self-stigma and attitudes toward help-seeking. This research suggests that exposing someone to mental health stigma could cause them to have higher levels of mental health self-stigma and more negative attitudes toward seeking psychological help.

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## Appendix A

Expressive subscale of the Personal Attributes Questionnaire (PAQ; Spence et al., 1974; Helmreich et al., 1981; Spence & Buckner, 2000)

Please indicate the extent to which the following traits describe the typical man or woman.

| | Woman much more than man | Woman more than man | Man more than woman | Man much more than woman |
|---|---|---|---|---|
| Devoted to others | ( ) | ( ) | ( ) | ( ) |
| Helpful to others | ( ) | ( ) | ( ) | ( ) |
| Aware of others' feelings | ( ) | ( ) | ( ) | ( ) |
| Kind | ( ) | ( ) | ( ) | ( ) |
| Emotional | ( ) | ( ) | ( ) | ( ) |

**Appendix B**

Twitter Posts: Prime Condition




Emily Jones
@ejones148
It's freezing outside! Perfect afternoon for hot chocolate ☕
3:48 PM · Jan 7, 2021
Emily Jones
@ejones148
My friend just told me that she's gonna start going to therapy. I told her to get over it... 🤦
11:45 PM · Jan 8, 2021
Emily Jones
@ejones148
Update: She made a therapy appointment. SMH 🙄🙄🙄
10:57 PM · Jan 10, 2021


Emily Jones
@ejones148
I can't fall asleep!! Ughhhh 😠
2:20 AM · Jan 12, 2021


Emily Jones
@ejones148
News flash! Everyone gets sad sometimes... my friend isn't depressed! Just get some exercise 😡
4:19 PM · Jan 14, 2021


Emily Jones
@ejones148
Soup is good... until you burn your mouth! 🍜
3:03 PM · Jan 16, 2021


Emily Jones
@ejones148
My friend is feeling sad again today. It's not "depression" or "bipolar" - those aren't real! STOP WHINING 🤪
9:16 PM · Jan 16, 2021

**Appendix C**

Twitter Posts: Non-Prime Condition




Emily Jones
@ejones148
It's freezing outside! Perfect afternoon for hot chocolate ☕
3:48 PM · Jan 7, 2021
Emily Jones
@ejones148
Really don't want to do my homework #procrastinationnation 📒
11:45 PM · Jan 8, 2021
Emily Jones
@ejones148
My parents and I ordered sushi for dinner earlier! Yum! 🍣🍣
10:57 PM · Jan 10, 2021


Emily Jones
@ejones148
I can't fall asleep!! Ughhhh 😠
2:20 AM · Jan 12, 2021


Emily Jones
@ejones148
About to take a walk with my sister! 🚶‍♀️ 🚶‍♀️
4:19 PM · Jan 14, 2021


Emily Jones
@ejones148
Soup is good... until you burn your mouth! 🍜
3:03 PM · Jan 16, 2021


Emily Jones
@ejones148
What a weird day... I'm ready for bed
9:16 PM · Jan 16, 2021

## Appendix D

Twitter Posts: Follow-up Questions

1) What is your overall opinion of the Twitter posts?

( ) Very negative

( ) Somewhat negative

( ) Neutral

( ) Somewhat positive

( ) Very positive

2) Based on the tweets, what is your overall opinion of the author?

( ) Very negative

( ) Somewhat negative

( ) Neutral

( ) Somewhat positive

( ) Very positive

3) How interesting do you think the tweets are overall?

( ) Very boring

( ) Somewhat boring

( ) Neutral

( ) Somewhat interesting

( ) Very interesting

4) Based on the tweets, how interesting do you think the author is as a person overall?

( ) Very boring

( ) Somewhat boring

( ) Neutral

( ) Somewhat interesting

( ) Very interesting

## Appendix E

Self-Stigma of Seeking Help (SSOSH) scale (Vogel et al., 2006)

Please rate each statement based on the degree to which you agree with it.

1) If I went to a therapist, I would be less satisfied with myself.

( ) Strongly disagree

( ) Somewhat disagree

( ) Agree and disagree equally

( ) Somewhat agree

( ) Strongly agree

2) I would feel inadequate if I went to a therapist for psychological help.

( ) Strongly disagree

( ) Somewhat disagree

( ) Agree and disagree equally

( ) Somewhat agree

( ) Strongly agree

3) It would make me feel inferior to ask a therapist for help.

( ) Strongly disagree

( ) Somewhat disagree

( ) Agree and disagree equally

( ) Somewhat agree

( ) Strongly agree

4) I would feel worse about myself if I could not solve my own problems.

( ) Strongly disagree

( ) Somewhat disagree

( ) Agree and disagree equally

( ) Somewhat agree

( ) Strongly agree

5) Seeking psychological help would make me feel less intelligent.

( ) Strongly disagree

( ) Somewhat disagree

( ) Agree and disagree equally

( ) Somewhat agree

( ) Strongly agree

6) My self-confidence would NOT be threatened if I sought professional help.

( ) Strongly disagree

( ) Somewhat disagree

( ) Agree and disagree equally

( ) Somewhat agree

( ) Strongly agree

7) I would feel okay about myself if I made the choice to seek professional help.

( ) Strongly disagree

( ) Somewhat disagree

( ) Agree and disagree equally

( ) Somewhat agree

( ) Strongly agree

8) My self-confidence would remain the same if I sought professional help for a problem I could not solve.

( ) Strongly disagree

( ) Somewhat disagree

( ) Agree and disagree equally

( ) Somewhat agree

( ) Strongly agree

9) My view of myself would not change just because I made the choice to see a therapist.

( ) Strongly disagree

( ) Somewhat disagree

( ) Agree and disagree equally

( ) Somewhat agree

( ) Strongly agree

10) My self-esteem would increase if I talked to a therapist.

( ) Strongly disagree

( ) Somewhat disagree

( ) Agree and disagree equally

( ) Somewhat agree

( ) Strongly agree

## Appendix F

Short Form of the Attitudes Toward Seeking Professional Psychological Help (ATSPPH-SF) scale (Fischer & Turner, 1970; Fischer & Farina, 1995)

Please rate each statement based on the degree to which you agree with it.

1) If I believed I was having a mental breakdown, my first inclination would be to get professional attention.

( ) Agree

( ) Partly agree

( ) Partly disagree

( ) Disagree

2) The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts.

( ) Agree

( ) Partly agree

( ) Partly disagree

( ) Disagree

3) If I were experiencing a serious emotional crisis at this point in my life, I would be confident that I could find relief in psychotherapy.

( ) Agree

( ) Partly agree

( ) Partly disagree

( ) Disagree

4) There is something admirable in the attitude of a person who is willing to cope with his or her conflicts and fears *without* resorting to professional help.

( ) Agree

( ) Partly agree

( ) Partly disagree

( ) Disagree

5) I would want to get psychological help if I were worried or upset for a long period of time.

( ) Agree

( ) Partly agree

( ) Partly disagree

( ) Disagree

6) I might want to have psychological counseling in the future.

( ) Agree

( ) Partly agree

( ) Partly disagree

( ) Disagree

7) A person with an emotional problem is not likely to solve it alone; he or she *is* likely to solve it with professional help.

( ) Agree

( ) Partly agree

( ) Partly disagree

( ) Disagree

8) Therapy is timely and expensive; it would not be of value for me.

( ) Agree

( ) Partly agree

( ) Partly disagree

( ) Disagree

9) A person should work out his or her own problems; getting psychological counseling would be a last resort.

( ) Agree

( ) Partly agree

( ) Partly disagree

( ) Disagree

10) Personal and emotional troubles, like many things, tend to work out by themselves.

( ) Agree

( ) Partly agree

( ) Partly disagree

( ) Disagree

## Appendix G

Demographics

Please answer the following demographic questions.

1) What is your gender?

( ) Male

( ) Female

( ) Other

( ) Prefer not to say

2) What is your age? _____

3) Have you ever seen a mental health practitioner?

( ) Yes

( ) No

( ) Prefer not to say

4) Have you ever been diagnosed with a mental health disorder?

( ) Yes

( ) No

( ) Prefer not to say

## Appendix H

Informed Consent

I am inviting you to participate in a research study. Involvement in the study is voluntary, so you may choose to participate or not. A description of the study is written below.

You will be asked to read a series of Twitter posts, as well as respond to a few different questionnaires. This will take approximately 6 minutes. There are no foreseeable risks of participating in this study. If you no longer wish to continue, you have the right to withdraw from the study, without penalty, at any time.

All information will be kept anonymous and confidential.

If you have any questions about the research, please contact psychology1795@gmail.com. If you have any questions concerning your rights as a research participant that have not been answered by the investigator, or if you wish to report any concerns about the study, you may contact the Union College Human Subjects Review Committee Chair Catherine Walker (walkerc@union.edu) or the Office for Human Research Protections (http://www.hhs.gov/ohrp/).

By checking the box below, you indicate that you understand the information stated above, and that you wish to participate in this research study.

( ) Yes, I consent.

## Appendix I

Debriefing Statement

Thank you for participating in this study. The goal of this study was to assess the effect of the mental health stigma, and gender roles, on attitudes towards psychological help-seeking.