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The Effect of the Type of Mental Disorder on Mental Health Stigma

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THE EFFECT OF THE TYPE OF MENTAL DISORDER ON MENTAL HEALTH STIGMA

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Mental health stigma is an important topic as it has an influence on the care clients receive, as well as resources allocated by society. Previous research has primarily investigated the topic of stigma associated with schizophrenia and various factors that may influence the endorsement of stigmatizing beliefs. Few studies have investigated whether the type of mental disorder has an influence on the level of stigma. The current study evaluated the difference in the level of stereotypes endorsed across three conditions: schizophrenia, major depressive disorder, and a typical person. Additionally, this study evaluated the reliability of using a global stereotype score obtained from summing the responses of the Attribution Questionnaire (AQ-27). The results of this study showed that there is a significant difference in the level of global stereotype scores across the three conditions and that a global stereotype score from the AQ-27 is reliable.

Introduction

Previous research on the topic of mental health stigma has primarily focused on the prevalence, various presentations, and effects of stigma (Corrigan, 2000; Reinke, Corrigan, Leonhard, Lundin, & Kubiak, 2004; Maier, Gentile, Vogel, & Kaplan, 2014). Few studies have evaluated the difference in the intensity of stigma associated with various disorders. The current study seeks to alleviate the gap in our research literature by investigating whether there is a difference in the intensity of public stereotypes with respect to Schizophrenia and Major Depressive Disorder.

According to Corrigan and Watson (2002), previous research suggests that much of the United States' population endorses stigmatizing attitudes toward individuals with mental illness. The term *stigma* is defined as a belief held about an individual with a perceived "discrediting characteristic that renders its bearer tainted, flawed, or inferior in the eyes of others" (Van Der Sanden, Bos, Stutterheim, Pryor, & Kok, 2013). In the mental health field, stigma is referred to as discriminating against an individual who has a psychological disorder. This ongoing assumption that individuals with mental illness are flawed or inferior is presumed to result from society's representation of mental illness (Van Der Sanden et al., 2013). In the past, individuals with psychological disorders have been stigmatized in many ways, including the belief that the individual was being possessed by demons, was constitutionally weak, and/or was exclusively responsible for his or her problems (Van Der Sanden et al., 2013).

The stigma of mental illness affects our society today as evidenced by the many negative consequences that persons with mental illness face, including rejection by society, discrimination, and negative social interactions (Hackler, Cornish, & Vogel,

2016; Van Der Sanden et al., 2013). There are three primary presentations of stigma, including *public stigma*, *stigma by association*, and *self-stigma*. *Public Stigma* is explained as the discrediting and discriminatory beliefs that the general public have about people with mental illness that may influence behavior toward people with mental illness (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003). *Stigma by association* (SBA) is defined as the influence of stigma on individuals not directly impacted by the disorder's symptoms. Such individuals include: friends, mental health workers, and family members of individuals with mental illness (Van Der Sanden et al., 2013). Additionally, *self-stigma* is the loss of self-esteem and self-efficacy from internalizing the beliefs of public stigma (Corrigan et al., 2003). In the following sections, the three primary presentations of stigma will be explained in more detail.

Public Stigma

Corrigan and colleagues (2003) suggested that there are three components of public stigma, including *stereotypes*, *prejudice*, and *discrimination*. *Stereotypes* are defined as beliefs that are widely accepted about a social group that perpetuates categorization of the individual within that social group. This categorization enables individuals to make quick assumptions and hold expectations about how the social group will behave. Dangerousness, responsibility for their illness, and helplessness are common stereotypes held about people with mental illness. *Prejudice* is defined as an individual endorsing stereotypic beliefs that lead to a negative emotional reaction toward individuals with mental illness. An example of prejudice in the mental health field might be someone supporting the stereotype of dangerousness (e.g. "All people with mental illness are violent") that leads to someone becoming afraid of all people with mental illness.

Discrimination is defined as the behavioral response of an individual based on prejudicial thoughts and emotions toward people with mental illness. Discriminatory behavior may vary; however, some common forms include segregation, coercion, hostile behaviors, avoidance, or withholding help from people with mental illness (Corrigan et al., 2003).

Stigma by Association

The stigma of mental illness does not only affect those with mental disorders, it also affects those around them. As discussed previously, the primary individuals affected by *stigma by association* (SBA) include: family, friends, and individuals who work in the mental health field (Van Der Sanden et al., 2013). An individual experiences SBA when others discredit or discriminate against him or her because of the association the individual has with someone with a mental illness (Van Der Sanden et al., 2013). Pryor, Bos, Reader, Stutterheim, Willems, and McClelland (2012) suggested that there are several factors associated with the occurrence of SBA, including the individual's perception of public stigma.

Angermeyer, Schulze, and Dietrich (2003) investigated the impact of stigma on family members of persons with schizophrenia. The researchers interviewed 122 family members from advocacy groups. The interviewers asked the participants questions regarding discrimination and prejudice. Additionally, the researchers asked the participants to recall specific examples of situations in which they felt misunderstood, excluded, or disadvantaged because they had a family member diagnosed with schizophrenia. Once the interviews were complete, the researchers used the qualitative data to analyze the impact of SBA. The researchers found that, when an individual is discredited or discriminated against for his or her association with a stigmatized person,

his or her reaction to this discrimination may be to create social distance from the individual with schizophrenia. This distance, in turn, could impact the emotional and physical health of the individual with schizophrenia (Angermeyer et al., 2003).

Van Der Sanden and colleagues (2013) examined the relationships between SBA and the perceived public stigma of mental illness. The researchers hypothesized that perceived public stigma would have a positive correlation to SBA, and that SBA would have a negative correlation to perceived closeness to the family member with mental illness. This study consisted of 527 individuals recruited online in the Netherlands to complete an online survey. The type of family relationships included were spouses, children, parents, siblings, in-laws, and other relationship. The participants were asked to provide the diagnosis of the family member. The type of mental illnesses included in this study were schizophrenia or psychotic disorder, addiction, depressive disorder, attention deficit hyperactivity disorder, personality disorder, autism, bipolar or other mood disorder, anxiety disorder, or another mental illness. The remainder of the survey included the Public Stigma Scale, Stigma-by-Association Scale, Mental Health Inventory, Inclusion of Other in the Self Scale, and a question measuring perceived heredity of mental illness (Van Der Sanden et al., 2013). The results of this study supported Pryor and colleague's (2012) suggestion that an individual's perception of public stigma impacts the likelihood of experiencing SBA. Furthermore, the results showed that, when individuals experience SBA, that it encourages them to distance themselves from the person with mental illness (Van Der Sanden et al., 2013).

Self-Stigma

In addition to the external effects of stigma, there are also internal implications associated with stigma. *Self-stigma* is one of the internal implications that has become a recent topic of research. As previously discussed, this presentation of stigma is defined as the internalization of public stigma by a person with mental illness that may result in the loss of self-esteem and self-efficacy (Corrigan et al., 2003). A study by Lannin, Vogel, Brenner, Abraham, and Heath (2015) investigated the impact that self-stigma has on an individual. Specifically, the study evaluated the probability that an individual experiencing self-stigma will decide to seek mental health treatment. The researchers evaluated 370 undergraduate students who exhibited signs of self-stigma and their decisions of whether or not to seek mental health treatment. Lannin and colleagues (2015) found that these individuals were experiencing a higher level of distress. Additionally, the researchers found that higher levels of self-stigma decreased an individual's likelihood of seeking mental health treatment by nearly half.

Another study by Maier and colleagues (2014) assessed self-stigma experienced by individuals with mental illness and individuals seeking therapy. The research study evaluated the role that media has on an individual's perception of psychologists, psychotherapy, and seeking help in general. They found that the portrayals of individuals with mental illness in the media have an impact on an individual's level of self-stigma, as well as an impact on the perceptions of psychologists (Maier et al., 2014). The results from this study showed that, when individuals view psychologists negatively, their level of self-stigma is higher, which negatively impacts their willingness to seek help. Additionally, the researchers found that, when watching movies or television shows, an

individual's perception of the character on-screen significantly predicted his or her perception of psychologists and his or her level of self-stigma associated with seeking help from a psychologist. The findings of this study suggested that media are a powerful resource that could be used to decrease the various presentations of stigma (Maier et al., 2014).

Attribution Theory

One possible explanation for the prominence of stigma is attribution theory, which states that a person's behavior is the result of a cognitive-emotional process (Corrigan, 2000; Weiner, 1995). This cognitive-emotional process occurs when an individual makes attributions about the controllability and cause of a person's mental illness. Attribution theory leads to assumptions about the individual's responsibility for the disorder. In turn, these assumptions result in emotional reactions that affect the individual's behavior toward a person with mental illness (Weiner, 1995). When in the presence of a person with mental illness, individuals try to explain who or what is responsible for the illness. If the individual attributes the illness to internal factors, or factors within the person's control, it is likely that the person with mental illness will be considered responsible for the illness. However, if the individual attributes the illness to genetic factors or something outside the person's control, it is less likely that the person with mental illness will be considered responsible for the mental illness (Corrigan et al., 2003). Additionally, an individual's thoughts about the cause and controllability of mental illness lead to assumptions about the person's behavior. As a result, these assumptions impact an individual's behavior toward individuals with mental illness. In other words, if an individual believes that a person with mental illness is responsible for

the illness, it may lead to punishing behavior such as segregation, coercion, or avoidance. Conversely, if an individual believes that a person is not responsible for his or her mental illness, it may lead to pity or the desire to help (Corrigan et al., 2003).

Stigma Reduction Approaches

There are varying ways in which stigma is experienced by individuals or the way in which it influences them. One study by Hackler and colleagues (2016) investigated the influence that hearing normative experiences of individuals with mental illness has on reducing the stigma of mental illness. Normative experiences were explained as an individual with mental illness sharing his or her struggle and experience with others. The participants in this study watched one of three videos (an individual with mental illness, an individual with a family member with mental illness, or a control video about Native Americans). Hackler and colleagues (2016) did not specify the disorders or category of mental illness displayed in the videos. The researchers found that hearing normative experiences from others about mental illness had a positive effect on individuals regarding the perception of mental illness (Hackler et al., 2016). The findings of this study suggest that the education about and exposure to persons with mental illness decrease the endorsement of stigmatizing beliefs. These findings were supported by a study that found greater familiarity with mental illness was inversely correlated with the endorsement of stigmatizing beliefs (Corrigan, Edwards, Green, Diwan, & Penn, 2001).

In addition to exposure to normative experiences, previous research has investigated the influence that familiarity with mental illness has on public stigma. Familiarity is defined as experience with and knowledge of mental illness (Corrigan et al., 2003). Corrigan and colleagues (2003) evaluated the association between the level of

familiarity with persons with mental illness and the endorsement of stigmatizing beliefs about individuals with schizophrenia. This study consisted of 542 participants recruited from a college campus to complete a survey. The survey included seven items assessing level of familiarity with mental illness, a vignette depicting an individual with schizophrenia, and several items assessing stereotypes endorsed for the individual depicted within the vignette. This study found that familiarity with mental illness is inversely correlated with the endorsement of stigmatizing beliefs about individuals with schizophrenia. Specifically, individuals who have more experience with mental illness are less likely to endorse discriminatory beliefs about individuals with schizophrenia, such as avoidance, fear, dangerousness, and anger. Conversely, individuals with more experience with mental illness were more likely to endorse beliefs associated with helping behaviors (Corrigan et al., 2003). Additionally, research has found that interaction with persons with mental illness reduces the fear associated with mental illness (Link & Cullen, 1986).

Factors that Influence Public Stigma

Anderson, Jeon, Blenner, Wiener, and Hope (2015) evaluated the differences in stigma associated with social anxiety disorder in comparison to depression and general mental illness. They evaluated this by exposing participants to three different vignettes depicting three disorders (social anxiety disorder, major depressive disorder, and "general mental illness"). The vignettes included a description of major depressive disorder and social anxiety disorder and excluded a label for the descriptions. To evaluate the difference between the conception of social anxiety disorder, major depressive disorder, and "general mental illness," the vignette depicting "general mental illness" included

only a label, and excluded a description of the individual. The data gathered included information about the perceived prevalence of the disorder, dangerousness, and gender ratio. Anderson and colleagues(2015) found that individuals who were male and not currently receiving treatment for their mental illness were associated with a preference for greater social distance; meaning that, individuals would prefer more social distance between themselves and the individuals with a mental disorder. The findings also showed that beliefs about dangerousness and being embarrassed by the disorder was a predictor of a preference for greater social distance. Additionally, there was no difference in the preference for social distance across general mental illness, social anxiety disorder, or major depressive disorder. However, there were differences in the factors that contribute to preference for social distance. The perceptions of dangerousness and embarrassment were seen as predictors of social distance from general mental illness. When social anxiety disorder was viewed as being a cause of workplace problems, it was associated with greater desire for social distance. Last, major depressive disorder was associated with greater desire for social distance when there it was perceived as having public visibility of symptoms (Anderson et al., 2015).

Another study by Dickerson, Sommerville, Origoni, Ringel, and Parente (2002) evaluated the discrimination experienced among 74 outpatient individuals with schizophrenia who were considered stable. The participants were interviewed using a variety of questionnaires. The researchers found that the participants reported "worry about being viewed unfavorably," "avoidance of self-disclosure about mental illness," "hearing offensive statements about persons with mental illness," and "being treated as less competent" (Dickerson et al., 2002, p. 151). The results showed general community

members being the most likely to be a source of stigma, with employers or supervisors being the second most likely. Additionally, this study found that experiencing stigma was not solely related to the individual's degree of psychopathology, level of functioning, degree of illness insight, or level of social involvement (Dickerson et al., 2002).

Influence of Demographic Variables on Stigma

Previous research has investigated various demographics of the individuals endorsing the stigmatizing beliefs, such as age, gender, level of education completed, and the level of familiarity the person has with mental illness. There is insufficient research to draw strong conclusions about the influence that demographics have in the endorsement of stigmatizing beliefs; however, several trends are apparent. A literature review by Parcesepe and Cabassa (2013) showed that an individual's age influences stigma in many ways. One way that age has been shown to influence stigma is the difference in the stereotypes endorsed (Parcesepe & Cabassa, 2013). For example, one study found that children diagnosed with depression were associated with more stereotypes involving violence and dangerousness than adults diagnosed with depression (Perry, Pescosolido, Martin, McLeod, & Jenson, 2007). Additionally, individuals who are younger are more likely to believe that a person with mental illness should be blamed and punished for his or her violent behavior than individuals who are older (Anglin, Link, & Phelan, 2006).

In addition to the difference in stereotypes endorsed across ages, previous research has found variance in psychological help-seeking attitudes across ages. One study found that older adults were more likely to seek professional psychological help than younger adults (Mackenzie, Gekoski, & Knox, 2006). As Mackenzie, Gekoski, and Knox (2006) point out, this finding is contrary to the general assertion that older adults

are less likely to seek psychological help due to stigmatizing beliefs and negative attitudes. This study consisted of 206 individuals who ranged in age from 18 to 89. The participants were administered a questionnaire that contained demographic questions, questions regarding the use of mental health services (past and future), frequency of and type of person with whom the participant discusses psychological problems, rating questions about the likelihood of engaging in help-seeking behavior, the Inventory of Attitudes toward Seeking Mental Health Services, and the Holden Psychological Screening Inventory (Mackenzie et al., 2006). Another study by Boyd, Jaunamarga, and Hashemi (2015) found that, in a sample of 159 veterans, younger individuals were more likely to perceive judgment by others for taking psychiatric medication, as well as a sense of shame related to mental illness. Overall, previous research has revealed a trend that older individuals are less likely to make decisions based on stigmatizing beliefs. Due to the trend previous research has shown, the current study included the age of participant as a covariate.

In addition to age, previous research has investigated the role that gender plays in stigma. A study by Farina (1998) showed that women are less likely than men to endorse discriminatory beliefs. Additionally, this study found that women are more likely to endorse beliefs of acceptance toward individuals with mental illness (Farina, 1998). Corrigan and Watson (2007) also found that women were less likely to endorse stigmatizing beliefs than were men. Their results indicated that women expressed less blame and expressed greater pity toward individuals with schizophrenia. However, women were more likely to endorse the dangerousness stereotype in people with schizophrenia (Corrigan & Watson, 2007).

Researchers have also investigated the level of education an individual has completed (Holmes, Corrigan, Williams, Canar, & Kubiak, 1999). Holmes and colleagues (1999) found that a person's level of education had a negative correlation with the endorsement of stigmatizing beliefs; specifically, people who have completed a higher level of education were less likely to endorse stigmatizing beliefs. Additionally, Farina (1998) found that men with less education showed more endorsement of prejudicial and discriminating beliefs toward individuals with mental illness than women. Corrigan and Watson (2007) added to this research by investigating the possibility of an individual's level of education as a method of obtaining knowledge and experience with persons with mental illness. This study recruited 1307 individuals online to complete a survey. The sample included participants with varying levels of completed education, including: some high school completion (15.8%), high school graduates (32.1%), some college completion (27.8%), and bachelor's degree or higher (24.4%). After data collection, the researchers weight-corrected the number of participants in each category according to the United States census information. In this study, each participant was randomly assigned one of four vignettes. The vignettes varied across four circumstances: disorder depicted, role of the corresponding family member, gender of the person depicted, and gender of the family member (Corrigan & Watson, 2007). After reading the vignette, the participants were asked to complete a 14-item survey. The results of this study showed that participants with a higher level of education were less likely to endorse stigmatizing beliefs for people who have health conditions. However, this study did not produce significant findings related to an individual's level of education and the level of stigmatizing beliefs endorsed.

Attribution Questionnaire

The Attribution Questionnaire (AQ-27) is a questionnaire developed by Corrigan (2012) that assesses stereotype endorsement. The questionnaire is comprised of a vignette and 27 questions evaluating the endorsement of nine stereotypes, including anger, dangerousness, fear, coercion, segregation, avoidance, help, pity, and responsibility (Corrigan, 2012). Previous research using the AQ-27 has almost exclusively focused on schizophrenia. Corrigan, Larson, Sells, Niessen, and Watson (2007) investigated the effect of videotaped education or contact with persons with mental illness. The researchers recruited 244 participants from a community college in the Chicago area. The participants were randomly assigned to either the videotape education or contact conditions. In the videotaped education condition, the participant was exposed to a video of a person with schizophrenia in an interview. The contact videotape consisted of a video of a person with schizophrenia discussing his or her experiences with the symptoms, struggles, hospitalization, and ongoing process of recovery with the disorder. The participants completed the Attribution Questionnaire in a pre-test (prior to watching the video) and post-test (after watching the video) manner. Results of this study found that individuals in the contact condition showed a decrease in discriminating stereotypes. Specifically, the segregation and coercion stereotypes decreased as a result of watching the contact videotape. Additionally, there was an increase in the pity stereotype after watching the contact videotape (Corrigan et al., 2007).

Sousa, Marques, Curral, and Queiros (2012) used the Attribution Questionnaire (Corrigan, 2012) to assess the number of stereotypes endorsed by family members with schizophrenia. The participants were 40 family members of individuals with

schizophrenia in Portugal. Participants were recruited in the waiting room of the Community Psychiatry Unit upon arrival with a family member with schizophrenia. The participants were asked to read the vignette and complete the 27 questions that followed. Results of this study indicated that family members of individuals with schizophrenia endorsed more attitudes of help and pity than of discriminatory stereotypes (Sousa, Marques, Curral, & Queiros, 2012).

The Present Study

The topic of mental health stigma is important to investigate because of the various presentations and implications of stigma within our society. Studies have investigated the topic of perception of mental illness; however, few have evaluated the difference in the nature of public stigma associated with various disorders. Research has primarily investigated perception of mental illness regarding cultural differences, age differences, stigma within the workplace, stigma among mental health workers, self-stigma among individuals with mental illness, and individuals with schizophrenia. As previously discussed, Corrigan and colleagues (2003) suggested that stereotyping is one of the three components of stigma. The purpose of this study is to determine whether the type of mental disorder influences the level of public stigma by investigating the stereotypes an individual endorses.

Schizophrenia was evaluated in this study because previous research using the AQ-27 has primarily focused on this disorder. To expand the literature an additional mental disorder was evaluated using the AQ-27. Major Depressive Disorder (MDD) was assessed, in addition to schizophrenia, because it is one of the most common mental disorders in the United States. MDD impacts 7% of the United States population, in

comparison to Schizophrenia, which impacts 0.3% to 0.7% of the United States population (American Psychiatric Association, 2013). Few studies have evaluated the stigma and stereotypes associated with MDD using the AQ-27 (Anderson et al., 2015). It is hypothesized that schizophrenia will be associated with higher levels of global stereotype scores than MDD. Previous research has found that individuals are more likely to endorse stereotypes of dangerousness, coercion-segregation, and avoidance for Schizophrenia, which results in a desire for increased social distance (Corrigan et al., 2003; Feldman & Crandall, 2007). Anderson and colleagues (2015) found that responsibility, as well as an individual's lack of reality awareness, contributes to the desire for increased social distance from individuals with MDD. Because previous research has found more stereotypes endorsed for Schizophrenia (Corrigan et al., 2003; Feldman & Crandall, 2007) than for MDD (Anderson et al., 2015), and the stereotypes endorsed for Schizophrenia are viewed as more severe than for MDD, it is hypothesized that global stereotype scores will be higher for Schizophrenia.

For the purpose of this study, a global stereotype score (the sum of stereotype scales acquired from the AQ-27) was used to assess participants' level of public stigma stereotypes endorsed. The global stereotype score was used in an attempt to measure an individual's endorsement of stereotypes in a cumulative manner, instead of the current method of measuring individual stereotypes endorsed. This attempt to measure cumulative stereotype endorsement, if evidence for reliability is found, will provide a better understanding of an individual's overall likelihood of stereotyping a person with Schizophrenia or MDD. Using the global stereotype score, there will be an evaluation of the different levels of public stigma stereotypes associated with an individual exhibiting

symptoms of schizophrenia or of Major Depressive Disorder using the Attribution Questionnaire (AQ-27; see Appendix A and Appendix B). There will also be a control vignette of an individual exhibiting no symptoms of psychopathology (see Appendix C). The hypotheses for the current study are as follows:

1. The sum of the AQ-27 stereotype scales will provide a reliable global stereotype score to measure an individual's endorsement of stereotypes in a cumulative manner.
2. Participants completing the survey containing the Schizophrenia vignette will have higher mean global stereotype scores on the AQ-27 than participants completing the survey containing the Major Depressive Disorder vignette or typical person vignettes, controlling for the participant's age, gender, familiarity with mental illness, and completed education level.
3. Participants completing the survey containing the Major Depressive Disorder vignette will have higher mean global stereotype scores on the AQ-27 than participants completing the survey containing the typical person vignette, controlling for the participant's age, gender, familiarity with mental illness, and completed education level.

Method

Participants

Participants for this study were 285 individuals recruited via Amazon Mechanical Turk (n.d.), a crowdsourcing Internet marketplace. Mechanical Turk is a website that allows for the coordination of human intelligence in completing various tasks. Human Intelligence Tasks are posted by requestors and include tasks such as drawing a picture, selecting the most preferred photograph, and completing surveys. Individuals, called workers, can browse the posted jobs and select the tasks that they are willing to complete in exchange for the posted monetary payment (Amazon Mechanical Turk, n.d.). Each participant in this study was directed to a Qualtrics survey via the provided survey link posted on Mechanical Turk. Qualtrics online survey tool is a website that allows researchers to create online surveys. After completing the survey, participants received payment of $1.00. This amount was based on the time necessary to complete the survey. To partake in this study, the participants were required to meet the following requirements: at least 18 years of age, reside in the United States, and willing to participate in the study.

Participants were asked to report gender, age, and educational achievement. Additionally, the participants answered questions regarding familiarity with mental illness (see Appendix A and Appendix B). This information was used as covariates in the primary analyses, as well as for supplemental post-hoc analysis.

A statistical power analysis was performed for four studies (Boysen & Logan, 2017; Calear, Batterham, Griffiths, & Christensen, 2017; Maier et. al, 2014; Van Der Sanden et al., 2013) evaluating various factors that impact stigma and found a mean

effect size (Cohen's *d*) of .91. This mean effect size is considered to be extremely large using Cohen's criteria. To obtain an adequate amount of data for this study, the projected sample size needed, with an alpha of .05 and power of .80, was approximately 210 individuals. An additional 75 participants were recruited to account for participant drop out or invalid responses, as well as to evaluate the reliability of the AQ-27.

Participants were excluded from the study who responded incorrectly to the manipulation check question or appeared not to have responded attentively (as indicated by multiple missing data points; $N = 13$) or did not fall within one standard deviation around the mean completion time ($M = 4.60$, $SD = 3.78$; $N = 27$). Additionally, participants who reported not being a citizen of the United States ($N = 1$) or having a current formal diagnosis of at least one of the disorders presented in the vignettes (schizophrenia $N = 4$ or MDD $N = 26$) were excluded from the study. After excluding participants meeting such criteria, the sample for this study consisted of 217 participants. Because this study is examining public stigma, participants who reported a formal diagnosis of schizophrenia or MDD were excluded from analyses. The original inclusion rule for the study was a completion time of more than three minutes, based on the completion time obtained from a pilot study of a small number of individuals prior to data collection. However, upon examining the final sample, it revealed a higher level of accurate responses with quicker completion times. The sample had a mean completion time of 4.60 minutes ($SD = 3.78$ minutes). Because so many of the participants completed the survey in less than three minutes, while appearing to have responded attentively based on the attention check, the exclusion criteria was changed to be any completion time outside of one standard deviation around the mean. Therefore, participants with a

completion time of less than 0.91 minutes or more than 8.5 minutes were excluded from analyses ($N = 27$).

The age of participants in the final sample of 217 individuals ranged from 20 to 69 ($M = 37.49$, $SD = 11.17$). The sample consisted of 53.5% male and 46.5% female participants. Table 1 displays the number and percentage of participants in this sample across gender and five age groups, as well as a comparison of the percentages in this sample to the percentages in the 2016 census data. (United States Census Bureau, 2016) The final sample recruited via Amazon Mechanical Turk was reasonably representative of the United States population regarding gender and age, consistent with research that indicates Mechanical Turk is representative of the United States population (Heen, Lieberman, & Meithe, 2014). However, the overall sample included a higher percentage than the national average of individuals diagnosed with schizophrenia (current sample = 1.6%; national average = 0.3% to 0.7%) and MDD (current sample = 10.4%; national average = 7%; American Psychiatric Association, 2013).

Table 1

Display of Participant Ages and Gender in Sample

	Current Study		2016 Census Data
	N	Percentage	Percentage
Age			
Ages 20 – 29	55	25.3	14.0
Ages 30 – 39	93	42.8	13.1
Ages 40 – 49	37	17.0	12.5
Ages 50 – 59	16	7.3	13.5
Ages 60 – 69	16	7.3	11.2
Gender			
Male	116	53.3	49.2
Female	101	46.5	50.7

Note: The age and gender percentages were not available from the Census Bureau for 2017, so the data from 2016 was used in this comparison.

In addition to gender, age, and mental illness diagnoses, information regarding the participants' level of education completed and familiarity with mental illness was obtained. There was one participant who had completed less than a high school diploma (0.5%), 38 who had obtained a high school diploma (17.5%), 61 who had completed some undergraduate coursework (28.1%), 86 who had obtained an undergraduate degree (39.6%), and 31 who had completed some graduate coursework or obtained a graduate degree (14.3%). Table 2 displays the number and percentage of participants in this sample across the five categories of education, as well as a comparison of sample percentages to 2017 census data (United States Census Bureau, 2017). There were 134 participants (61.8%) who reported having spent time with a person with mental illness. For this 61.8%, the median number of individuals with whom the participants had interacted was 3, with the average estimated percentage of exposure in the participant's lifetime being approximately 27% (*SD* = 25.99). The median was reported for the number

of individuals with whom participants' had interacted because there were two outliers of 500 and 3000 in the data.

Table 2

Display of Participant Completed Education Level

	Current Study		2017 Census Data
	N	Percentage	Percentage
Less than High School Diploma	1	0.5	0.4
High School Diploma	38	17.5	28.8
Some Undergraduate Coursework	61	28.1	18.8
Undergraduate Degree	86	39.6	29.8
Some Graduate Coursework or Graduate Degree	31	14.3	11.4*

*The Census Bureau did not provide information for individuals who had completed "some graduate coursework." The number provided for this category represents individuals who have obtained a graduate degree.

Measures

Attribution Questionnaire (Corrigan, 2012): The Attribution Questionnaire (AQ-27; see Appendices C through E) is a questionnaire that assesses public stigma. The questionnaire is comprised of a vignette that is followed by 27 questions assessing nine stereotypes, including anger, dangerousness, fear, coercion, segregation, avoidance, help, pity, and responsibility (Corrigan, 2012). There were three vignettes used in this study, one to depict each of the situations being evaluated (Schizophrenia, Major Depressive Disorder, and a typical person). The two disorder vignettes described an individual displaying characteristics that are consistent with a sample of the symptoms listed in the *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (DSM-5; American Psychiatric Association, 2013). For condition one, the vignette presented was the original

vignette that was used in previous research using the AQ-27. The other two conditions emulated the previously established vignette closely, changing only the content relevant to depression to a typical person. The number of hospitalizations was also changed in the typical person vignette, because six hospitalizations for a typical person was seen as being excessive. According to the Centers for Disease Control and Prevention (CDC), 5.5% of the United States population had at least one hospitalization in 2015, with only 0.7% of the population having three or more hospitalizations (Centers for Disease Control and Prevention, 2015). The vignettes that were used in this study are as follows:

Condition 1 (see Appendix C): Harry is a 30-year-old single man with schizophrenia. Sometimes he hears voices and becomes upset. He lives alone in an apartment and works as a clerk at a large law firm. He has been hospitalized six times because of his illness.

Condition 2 (see Appendix D): Harry is a 30-year-old single man with Major Depressive Disorder. Sometimes he stays in bed all day and does not talk to anyone. He lives alone in an apartment and works as a clerk at a large law firm. He has been hospitalized six times because of his illness.

Condition 3 (see Appendix E): Harry is a 30-year-old single man who is typical. He likes to watch TV and sometimes gets allergies. He lives alone in an apartment and works as a clerk at a large law firm. He has been hospitalized one time because of his illness.

After reading one of the randomly assigned vignettes, the participants answered 27 questions using a nine-point Likert scale, from 1 (*no or nothing*) to 9 (*very much or completely*). The questions were separated into three questions per stereotype subscale.

The questionnaire was scored using the mean of the respondent's answers in each subscale to establish the level of acquiescence across stereotypes of stigma. According to Corrigan (2012), high means (scores of 6 or above) are indicative of the individual having more beliefs associated with that stereotype, means scoring in the median (scores of 5) are indicative of a neutral stance with that stereotype, and low means (scores below 4) are indicative of having fewer beliefs associated with that stereotype. The questions on the avoidance dimension (items 7, 16, and 26) were scored in reverse. According to Corrigan and colleagues (2003), results of a confirmatory factor analysis showed that items within the help and avoidance stereotypes, items within the fear and dangerousness stereotypes, and items within the coercion and segregation stereotypes, were highly correlated. Therefore, the stereotype subscales were combined to create help-avoidance, fear-dangerousness, and coercion-segregation scales for the purposes of evaluating psychometric properties. Each of the six stereotype subscales showed very high reliability: responsibility (.70), pity (.74), anger (.89), fear-dangerousness (.96), help-avoidance (.88), and coercion-segregation (.89) (Brown, 2008; Corrigan et al., 2003). For the purpose of this study, the sum of scores on the stereotype subscales was used to identify the participants' global stereotype score. The global score could range from 27 to 243, with higher global stereotype scores indicating more stereotype endorsement.

Procedure

After receiving Institutional Review Board approval, participants were recruited from Amazon Mechanical Turk. The mean completion time for the survey was 4.60 minutes (*SD* = 3.78). After completing the survey, the participant received a payment of $1.00.

It was predicted that this study posed minimal risk for the participants. After selecting this study on Amazon Mechanical Turk, the participant was directed to the Qualtrics survey. Participants were presented with an electronic informed consent form before completing this survey (Appendix F). Following informed consent, the participant was randomly assigned to one of three conditions: 1. Vignette of a male displaying symptoms of schizophrenia, 2. A vignette of a male depicting depressive symptoms, 3. A control vignette of a typical male. The participant read the vignette and responded to the AQ-27 questions. To insure participants responded attentively to the questions, a question directing the participant to answer in a specific manner (i.e., "Would you please select 3 for this question?") was included. The response to this question was used to determine quality of responses. If the participant did not respond to the question appropriately, the data obtained from that participant was excluded from analysis.

Following the AQ-27, the participant was directed to a page containing questions regarding gender, age, educational achievement, and familiarity with mental illness (see Appendix D). At the end of the questionnaire, participants were debriefed on the purpose of this study (see Appendix G) and thanked for contributing to the research. There was a mean completion time of 4.60 minutes (*SD* = 3.78 minutes). Upon completion of data collection, the data set was kept in a password protected Excel and SPSS file on a secure drive. The participants' names on the consent forms were stored in a scrambled order to protect the participants' identities from being matched to the participants' answers.

Results

Hypothesis Testing

Coefficient alpha was used to evaluate the reliability of the global stereotype score for the AQ-27 for each of the three conditions. The coefficient alphas for the AQ-27 associated with each of the conditions are as follows: condition 1 (schizophrenia vignette) was .91, condition 2 (MDD vignette) was .87, and condition 3 (typical person vignette) was .85. Because each of the conditions had a coefficient alpha above .60 (indicating good internal reliability) the global stereotype score is considered reliable. Therefore, hypothesis one was supported.

To test the primary hypotheses an ANCOVA was conducted. Levene's test and normality checks were also run to insure that the assumptions were met. The Levene's test revealed that the results were heterogeneous, and there was significant variance in the mean scores across the conditions, F (2, 214) = 6.36, p = .002. Specifically, controlling for age, gender, education level, and familiarity with mental illness, the schizophrenia vignette (M = 114.6, SD = 31.4) was associated with significantly higher mean global stereotype scores than the depression vignette (M = 98.0, SD = 27.2) or typical person vignette (M = 70.0, SD = 23.2), which is consistent with hypothesis two; and the depression vignette was associated with significantly higher mean stereotype scores than the typical person vignette, which is consistent with hypothesis three, F (2, 214) = 44.94, p < .001. Therefore, hypotheses two and three were supported. Figure 1 demonstrates the variability in the global stereotype scores across the three conditions. Table 3 presents the results including the covariates.

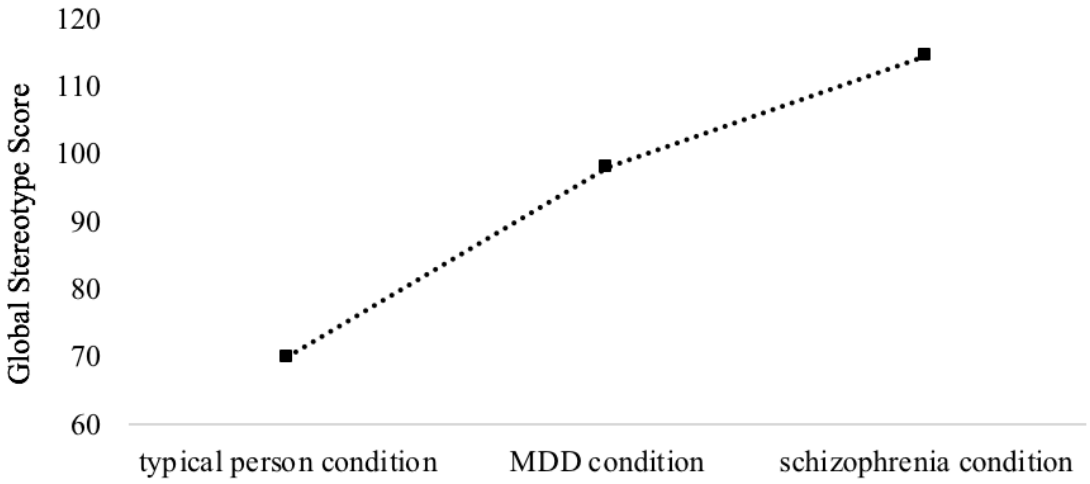

Figure 1: Global Stereotype Score across the three conditions

Note: typical person condition ($N = 71$); MDD condition ($N = 74$); schizophrenia condition ($N = 72$)

Table 3

ANCOVA Results

	Sum of Squares	df	Mean Squares	F	p	η^2
Condition	67453.9	2	33727.0	44.94	< .001	0.294
Gender	44.4	1	44.4	0.059	0.808	0.000
Age	3113.2	1	3113.2	4.14	0.043	0.014
Education	243.4	1	243.4	0.324	0.570	0.001
How Many	967.7	1	967.7	1.289	0.257	0.004
Percentage of Lifetime	589.6	1	589.6	0.785	0.376	0.003

Note: How Many refers to the total number of individuals with mental illness the participant has interacted with; Percentage of Lifetime refers to the approximate percentage of the participant's lifetime that they have had exposure to individuals with mental illness

Discussion

The purpose of the current study was to investigate whether the type of mental disorder has an influence on level of stigma by measuring stereotype endorsement. The current study evaluated the reliability of using a global stereotype score on the Attribution Questionnaire (AQ-27) to measure the endorsement of stereotypes in a cumulative manner. This was done by summing the responses, instead of the current method of using stereotype subscales. Additionally, it was predicted that schizophrenia would be associated with higher global stereotype endorsement than major depressive disorder (MDD) or a typical person, and that MDD would be associated with higher global stereotype endorsement than a typical person.

Participants were recruited via Amazon Mechanical Turk, and appeared to closely represent the United States population regarding age, gender, and completed education level. However, there was a higher percentage than the national average of individuals who reported having a formal diagnosis of schizophrenia or MDD. Participants who reported a formal diagnosis of schizophrenia or MDD were excluded from analyses, as the purpose of the current study was to examine public stigma. Given the exclusion of such participants, the results of this study appear to be a reasonably accurate representation of the endorsement of stereotypes in public stigma for schizophrenia and MDD within the United States.

Attribution Questionnaire Psychometrics

This study used the sum of the responses on the AQ-27 to obtain the global stereotype score to evaluate public stigma associated with each of the conditions. The global stereotype score from the AQ-27 was shown to be a reliable way to measure the

concept, which allowed for the evaluation of stereotype endorsement in a cumulative manner.

Implication for Variance in Stereotype Endorsement

Based on previous research, it was hypothesized that individuals completing the schizophrenia vignette would have higher global stereotype scores than those completing the survey containing the MDD or typical person vignette, and that individuals completing the MDD vignette would have higher global stereotype scores than those completing the typical person vignette. These hypotheses were supported. Previous research has investigated several possible explanations for the endorsement of stigmatizing beliefs. One explanation is attribution theory (Weiner, 1995), which suggests that stigma can be explained as a cognitive-emotional process that occurs when one makes assertions about the controllability and cause of mental illness. The assumptions that are made regarding the responsibility of the disorder result in emotional reactions that influence an individual's behavior toward a person with mental illness (Weiner, 1995).

The findings of the current study are consistent with attribution theory, as schizophrenia was associated with a higher level of stereotypes endorsed than was MDD, and MDD was associated with a higher level of stereotypes endorsed than a typical person. Previous research has revealed that schizophrenia is typically associated with stereotypes such as dangerousness, coercion-segregation, and avoidance (Corrigan et al., 2003) and MDD is typically associated with stereotypes such as responsibility for one's symptoms (Anderson et al., 2015). It could be assumed that, due to the low prevalence of schizophrenia, individuals are less informed about the controllability and cause of the

disorder, which leads to the higher levels of stereotype endorsement, consistent with attribution theory (American Psychiatric Association, 2013; Anderson et al., 2015; Corrigan et al., 2003). Additionally, as the study conducted by Anderson and colleagues (2015) showed, individuals with MDD are seen as being responsible for the symptoms of the disorder, which also leads to stereotype endorsement, consistent with attribution theory. It is interesting to note that the average global stereotype score was 70 for the typical person vignette. The lowest possible score for the AQ-27 is a score of 27, which is indicative of no stereotype endorsement. Therefore, the results suggest that there was some stereotype endorsement even for the typical person depicted in the vignette. One possible explanation is stigmatization of hospitalization or allergies. Future research should evaluate stereotype endorsement with other qualities or issues further.

The global stereotype score ranges from a possible 27 (no stereotype endorsement) to 243 (extreme stereotype endorsement), with higher global stereotype scores indicating more stereotype endorsement. According to Corrigan (2012), high subscale means (scores of 6 or above) indicate high endorsement of that stereotype subscale, median subscale means (scores of 5) are indicative of a neutral stance of that stereotype subscale, and low means (scores below 4) indicate less endorsement of that stereotype subscale. However, because Corrigan's procedure is a subscale approach the categorization of low, medium, and high scores would likely present differently than in a global score. Future research should attempt to identify the appropriate cutoffs for these ranges with the global score. Identification of cutoffs might be done by examining standard deviations for normative data of the United States population. Another possible approach would be to compare the global stereotype score with scores from a measure

evaluating prejudice and discrimination. This would allow for evaluation of the level of global stereotype scores that correlate with and influence the other two components of public stigma. Using this comparison, the level of stereotype endorsement could be divided into ranges by the expected influence that it may have on prejudice and discrimination. This would allow for the ranges of low, medium, and high stereotype endorsement to correspond with the level of impact it may have on prejudicial reactions and discriminating responses.

There are several implications for the findings of the current study, including the influence of stigma on mental health treatment, professionals and agencies in the mental health system, and the improvement of stigma reduction programs. Additionally, this study provides more information that could contribute to the construction of better theories of stigma. These implications will be discussed in more depth in the following sections.

Demographic Variables in Stereotype Endorsement

Previous research has investigated the influence of several demographic factors on stigma of mental illness, including age, gender, familiarity with mental illness, and completed education level. Based on this previous research, this study included these variables as covariates. Despite previous research suggesting that these factors have an influence on stigma, the results of this study indicated that age was the only variable to have a significant effect on the endorsement of stereotypes. One possible explanation of this is that previous research has investigated each of these factors independently and the current study included these factors as covariates, which assumes some level of

interaction among the factors. Future research should further evaluate the possible relationship among these factors, and the influence that they may have on stigma.

It is interesting to note the high percentage of individuals in this sample who reported having spent time with a person with mental illness. Previous research has indicated that as familiarity with mental illness increases, stigmatization decreases. This could explain the lower than expected mean global stereotype scores for the conditions, discussed in the previous section. However, the current study did not examine in any detail the type of exposure that the participant had received. The participants could have had exposure to individuals with Major Depressive Disorder or schizophrenia, which may have influenced the responses in the study. Future research should investigate the influence that type of exposure has on stereotype endorsement.

Implications

This study adds to the current literature by providing research that can help to construct better theories of stigma. One way that it does this is by raising the question of how to conceptualize stigma, as a unitary concept, as done in this study, or with separate components? A global measure of stigma allows for a simple way to compare, rank, and conceptualize the impact that stigma has across disorders. It also enables simpler tracking and/or rank-ordering of disorders to monitor the fairness of allocation of resources in mental health programs (i.e., funded treatment facilities, stigma reduction programs, etc.). Additionally, a global measure allows for a simpler investigation on the potential biases that may impact individuals in various contexts, such as from mental health professionals, medical doctors, caregivers, law enforcement, workplace supervisors, media, and/or educators.

While the separate component approach allows for evaluation of the specific assumptions being made for disorders, it does not allow for easy comparison across disorders. Using the global stereotype approach, it is easier to conceptualize the impact that stereotype endorsement has on individuals with different disorders. When a disorder is associated with low global stereotype scores, the individual with the disorder would be impacted less by categorizing beliefs and assumptions of the disorder. Conversely, when the global stereotype score is high, the individual would be impacted by more categorizing beliefs and assumptions of the disorder. Separate components would provide information about the specific categorizing beliefs and assumptions being made for the disorders; however, a global stereotype approach allows for a comprehensive conceptualization of stereotype endorsement that can be used to evaluate the impact of stigmatization across disorders.

The findings of this study, upon replication across other disorders, may assist researchers and directors of mental health stigma reduction programs better target the improvement of education about mental illness and acceptability of mental health treatment. As previous research has shown (Corrigan et al., 2001; Hackler et al., 2016), education about and exposure to mental illness are effective methods of reducing mental health stigma. The directors of stigma reduction programs may use the findings of the current study to create educational materials that target beliefs about disorders with higher levels of stereotype endorsement, for instance, providing more information about the cause and characteristics of schizophrenia. Improvement of anti-stigma programs may encourage individuals to seek mental health treatment sooner, which, in turn, may be cheaper and more effective treatment.

Ultimately, mental health professionals may use this information to alter their approach to the diagnostic and treatment process. This study provided evidence that there is a difference in the endorsement of stereotypes across mental disorders. Mental health professionals should keep this in mind when considering diagnoses and treatment approaches based on the possible impact that stigmatization may have on the individual. Mental health professionals should consider the level of impairment stigmatization is causing in the client's life, including educational, occupational, and social impairment. Negative effects may include stereotyping such as avoidance, blaming, segregation, and/or coercion (Corrigan et al., 2003). The field needs to consider the impact that stigmatization by diagnosis may have on the client. In addition, using the information about the difference in stereotype endorsement, counselors, psychiatrists, and psychologists may address the potential influence of this stigmatization to help with treatment efficacy and generalization of skills learned in therapy. This may be done by helping the individual suffering from mental illness to identify and strengthen coping skills to utilize in response to such stereotype endorsement. Because stigmatization could be seen as an external stressor causing impairment in an individual's well-being, the utilization of such coping skills may help him or her to better focus on the goals of treatment by attempting to neutralize, or at least reduce, the impact of stigmatization.

Limitations and Suggestions for Future Research

One limitation to this study was that it only assessed the level of stereotypes endorsed, and did not consider the two other components of public stigma: prejudice (emotional reaction) and discrimination (behavioral response). Schizophrenia and MDD, as well as other disorders, should be evaluated using all three components of this theory

of stigma. However, this study raises some questions about the current theory of stigma using such components. If the concept of stereotype endorsement can be evaluated using a global approach, would it be possible to measure the other two components in such a way? Future research should attempt to answer this question. Additionally, the relationship among global stereotype endorsement, prejudice, and discrimination should be evaluated. It would be interesting to investigate the possibility of creating a comprehensive measure of stigma that encompasses stereotype endorsement, prejudice, and discrimination into a global stigma score.

Another limitation of the current study is that it provided reliability information on the global AQ-27 stereotype score, but did not provide any validity information. The validity of the global measure needs to be evaluated in more depth by independent researchers. Additionally, this study utilized the original vignette provided for the AQ-27 and mirrored the format for the additional vignettes, only changing the characteristics displayed for the purposes of the diagnosis being presented. Because the original vignette depicted a male adult, the vignettes in this study only depicted male adults. It is unclear the role that gender, age, and/or ethnicity in the original vignette may have played in the participants' endorsement of stereotypes. Future research should attempt to address these issues by manipulating these factors in the vignettes presented and investigating the impact they have on stereotype endorsement.

Another limitation may stem from the characterization of the "typical" person. The vignette for the typical person condition depicted an individual with allergies and one hospitalization. This vignette was altered in the number of hospitalizations, because six hospitalizations was excessive for a typical person based on the information provided

by the CDC (Centers for Disease Control and Prevention, 2015). The mean global stereotype scores for the typical person vignette were significantly lower than both disorder conditions; however, the mean was still higher than expected. This elevated mean global stereotype score suggests stigmatizing beliefs are being endorsed for one of the characteristics displayed in the vignette. It is possible that the stereotype endorsement is due to an individual being hospitalized, having allergies, or being described as typical. Future research should explore which of these characteristics are producing stigmatization. Additionally, the vignettes provided a label for the disorder presented in the vignette. While this study did not investigate the influence of labeling theory, future research should evaluate the influence of this theory on these findings. Additionally, it would be interesting to evaluate the possible interaction between labeling theory and attribution theory.

This study focused on the difference in the level of global stereotype endorsement across schizophrenia, MDD, and a typical person. Future research should attempt to continue bridging the gap in the current literature by investigating the level of global stereotype endorsement in other psychological disorders, such as anxiety, neurodevelopmental disorders, and/or trauma and stressor-related disorders. Additionally, it would be important to evaluate the difference in the endorsement of stereotypes in the other presentations of stigma, such as self-stigma and stigma by association. It would also be important to evaluate the national average and range of the level of stigma related to mental illness as a whole and across disorders.

Another question to be answered is whether disorder prevalence is impacted by the level of stigma associated with disorders? Future research should attempt to answer

this question so that mental health professionals may address issues in diagnostic procedures, if necessary.

There was a high percentage of participants who reported having interaction with individuals with mental illness. Of this high percentage, there were two outliers of reported number of individuals with whom the participants' had interacted. It is possible these were mental health professionals. This study did not ask about the participants' occupation or involvement within the mental health system. It would be important to investigate the level of stereotypes endorsed by professionals and agencies in the mental health system, such as counselors, clinicians, psychiatrists, funding agencies, insurance companies, law enforcement, and/or medical professionals to evaluate whether the level of stereotype endorsement influences quality of care in the health care system. This investigation is important to evaluate the influence that stereotype endorsement may have on quality of treatment, allocation of resources, and/or fairness in the legal system for individuals with mental illness.

Conclusion

In conclusion, the current study found that summing the responses to the AQ-27 provides a reliable global stereotype score for measuring the endorsement of stereotypes. This global approach to evaluating the endorsement of stereotypes provides an effective way to compare the overall level of stereotypes and, therefore, allows for a simpler investigation of differences in stigmatizing beliefs. The results of this study also showed that there is a significant difference in the level of global stereotypes endorsed across the three conditions of schizophrenia, MDD, and a typical person. Specifically, schizophrenia was associated with higher global stereotype scores than MDD and a typical person, and

MDD was associated with higher global stereotype scores than a typical person. Future research should replicate these findings, as well as apply this approach in evaluating stereotype endorsement with other disorders and in other situations. Finally, mental health professionals should consider supplementing treatment approaches for clients to address in the impact of stigma that accompanies different diagnoses.

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Appendix A: Demographics Section Page 1

What is your gender?

- ○ Male
- ○ Female

How old are you?

What is the highest level of education that you have completed?

- ○ Les than a High School diploma
- ○ High School diploma
- ○ Some undergraduate coursework
- ○ Undergraduate degree
- ○ Some graduate coursework or graduate degree

Do you have a formal diagnosis of Schizophrenia?

- ○ Yes
- ○ No

Do you have a formal diagnosis of Major Depressive Disorder?

- ○ Yes
- ○ No

To your knowledge, have you spent time with a person with mental illness?

- ○ Yes
- ○ No

Appendix B: Demographics Section Page 2

Approximately how many different people have you interacted with who have a mental illness?

Approximately what percentage of your lifetime have you spent with person(s) diagnosed with mental illness? (We recognize that this is a rough estimate. We are looking for an approximation.)

0 10 20 30 40 50 60 70 80 90 100

Appendix C: Attribution Questionnaire for Condition 1

Please read the following statement about Harry:
Harry is a 30-year-old single man with schizophrenia. Sometimes he hears voices and becomes upset. He lives alone in an apartment and works as a clerk at a large law firm. He has been hospitalized six times because of his illness.

Now answer each of the following questions about Harry. Click the number of the best answer to each question.

	Not at all	2	3	4	5	6	7	8	Very much
I would feel aggravated by Harry.	○	○	○	○	○	○	○	○	○
I would feel unsafe around Harry.	○	○	○	○	○	○	○	○	○
Harry would terrify me.	○	○	○	○	○	○	○	○	○
How angry would you feel at Harry?	○	○	○	○	○	○	○	○	○
If I were in charge of Harry's treatment, I would require him to take his medication.	○	○	○	○	○	○	○	○	○
I think Harry poses a risk to his neighbors unless he is hospitalized.	○	○	○	○	○	○	○	○	○
If I were an employer, I would interview Harry for a job.	○	○	○	○	○	○	○	○	○
I would be willing to talk to Harry about his problems.	○	○	○	○	○	○	○	○	○
I would feel pity for Harry.	○	○	○	○	○	○	○	○	○
I would think that it was Harry's own fault that he is in the present condition.	○	○	○	○	○	○	○	○	○
How controllable, do you think, is the cause of Harry's present condition?	○	○	○	○	○	○	○	○	○
How irritated would you feel by Harry?	○	○	○	○	○	○	○	○	○
How dangerous would you feel Harry is?	○	○	○	○	○	○	○	○	○
How much do you agree that Harry should be forced into treatment with his doctor even if he does not want to?	○	○	○	○	○	○	○	○	○
I think it would be best for Harry's community if he were put away in a psychiatric hospital.	○	○	○	○	○	○	○	○	○
I would share a car pool with Harry every day.	○	○	○	○	○	○	○	○	○
How much do you think an asylum, where Harry can be kept away from his neighbors, is the best place for him?	○	○	○	○	○	○	○	○	○
I would feel threatened by Harry.	○	○	○	○	○	○	○	○	○
How scared of Harry would you feel?	○	○	○	○	○	○	○	○	○
How likely is it that you would help Harry?	○	○	○	○	○	○	○	○	○
Would you please select 3 for this question?	○	○	○	○	○	○	○	○	○
How certain would you feel that you would help Harry?	○	○	○	○	○	○	○	○	○
How much sympathy would you feel for Harry?	○	○	○	○	○	○	○	○	○
How responsible, do you think, is Harry for his present condition?	○	○	○	○	○	○	○	○	○
How frightened of Harry would you feel?	○	○	○	○	○	○	○	○	○
If I were in charge of Harry's treatment, I would force him to live in a group home.	○	○	○	○	○	○	○	○	○
If I were a landlord, I probably would rent an apartment to Harry.	○	○	○	○	○	○	○	○	○
How much concern would you feel for Harry?	○	○	○	○	○	○	○	○	○

Appendix D: Attribution Questionnaire for Condition 2

Please read the following statement about Harry:
Harry is a 30-year-old single man with Major Depressive Disorder. Sometimes he stays in bed all day and does not talk to anyone. He lives alone in an apartment and works as a clerk at a large law firm. He has been hospitalized six times because of his illness.

Now answer each of the following questions about Harry. Click the number of the best answer to each question.

	Not at all	2	3	4	5	6	7	8	Very much
I would feel aggravated by Harry.	○	○	○	○	○	○	○	○	○
I would feel unsafe around Harry.	○	○	○	○	○	○	○	○	○
Harry would terrify me.	○	○	○	○	○	○	○	○	○
How angry would you feel at Harry?	○	○	○	○	○	○	○	○	○
If I were in charge of Harry's treatment, I would require him to take his medication.	○	○	○	○	○	○	○	○	○
I think Harry poses a risk to his neighbors unless he is hospitalized.	○	○	○	○	○	○	○	○	○
If I were an employer, I would interview Harry for a job.	○	○	○	○	○	○	○	○	○
I would be willing to talk to Harry about his problems.	○	○	○	○	○	○	○	○	○
I would feel pity for Harry.	○	○	○	○	○	○	○	○	○
I would think that it was Harry's own fault that he is in the present condition.	○	○	○	○	○	○	○	○	○
How controllable, do you think, is the cause of Harry's present condition?	○	○	○	○	○	○	○	○	○
How irritated would you feel by Harry?	○	○	○	○	○	○	○	○	○
How dangerous would you feel Harry is?	○	○	○	○	○	○	○	○	○
How much do you agree that Harry should be forced into treatment with his doctor even if he does not want to?	○	○	○	○	○	○	○	○	○
I think it would be best for Harry's community if he were put away in a psychiatric hospital.	○	○	○	○	○	○	○	○	○
I would share a car pool with Harry every day.	○	○	○	○	○	○	○	○	○
How much do you think an asylum, where Harry can be kept away from his neighbors, is the best place for him?	○	○	○	○	○	○	○	○	○
I would feel threatened by Harry.	○	○	○	○	○	○	○	○	○
How scared of Harry would you feel?	○	○	○	○	○	○	○	○	○
How likely is it that you would help Harry?	○	○	○	○	○	○	○	○	○
Would you please select 3 for this question?	○	○	○	○	○	○	○	○	○
How certain would you feel that you would help Harry?	○	○	○	○	○	○	○	○	○
How much sympathy would you feel for Harry?	○	○	○	○	○	○	○	○	○
How responsible, do you think, is Harry for his present condition?	○	○	○	○	○	○	○	○	○
How frightened of Harry would you feel?	○	○	○	○	○	○	○	○	○
If I were in charge of Harry's treatment, I would force him to live in a group home.	○	○	○	○	○	○	○	○	○
If I were a landlord, I probably would rent an apartment to Harry.	○	○	○	○	○	○	○	○	○
How much concern would you feel for Harry?	○	○	○	○	○	○	○	○	○

Appendix E: Attribution Questionnaire for Condition 3

Please read the following statement about Harry:
Harry is a 30-year-old single man who is typical. He likes to watch tv and sometimes gets allergies. He lives alone in an apartment and works as a clerk at a large law firm. He has been hospitalized one time because of his illness.

Now answer each of the following questions about Harry. Click the number of the best answer to each question.

	Not at all	2	3	4	5	6	7	8	Very much
I would feel aggravated by Harry.	○	○	○	○	○	○	○	○	○
I would feel unsafe around Harry.	○	○	○	○	○	○	○	○	○
Harry would terrify me.	○	○	○	○	○	○	○	○	○
How angry would you feel at Harry?	○	○	○	○	○	○	○	○	○
If I were in charge of Harry's treatment, I would require him to take his medication.	○	○	○	○	○	○	○	○	○
I think Harry poses a risk to his neighbors unless he is hospitalized.	○	○	○	○	○	○	○	○	○
If I were an employer, I would interview Harry for a job.	○	○	○	○	○	○	○	○	○
I would be willing to talk to Harry about his problems.	○	○	○	○	○	○	○	○	○
I would feel pity for Harry.	○	○	○	○	○	○	○	○	○
I would think that it was Harry's own fault that he is in the present condition.	○	○	○	○	○	○	○	○	○
How controllable, do you think, is the cause of Harry's present condition?	○	○	○	○	○	○	○	○	○
How irritated would you feel by Harry?	○	○	○	○	○	○	○	○	○
How dangerous would you feel Harry is?	○	○	○	○	○	○	○	○	○
How much do you agree that Harry should be forced into treatment with his doctor even if he does not want to?	○	○	○	○	○	○	○	○	○
I think it would be best for Harry's community if he were put away in a psychiatric hospital.	○	○	○	○	○	○	○	○	○
I would share a car pool with Harry every day.	○	○	○	○	○	○	○	○	○
How much do you think an asylum, where Harry can be kept away from his neighbors, is the best place for him?	○	○	○	○	○	○	○	○	○
I would feel threatened by Harry.	○	○	○	○	○	○	○	○	○
How scared of Harry would you feel?	○	○	○	○	○	○	○	○	○
How likely is it that you would help Harry?	○	○	○	○	○	○	○	○	○
Would you please select 3 for this question?	○	○	○	○	○	○	○	○	○
How certain would you feel that you would help Harry?	○	○	○	○	○	○	○	○	○
How much sympathy would you feel for Harry?	○	○	○	○	○	○	○	○	○
How responsible, do you think, is Harry for his present condition?	○	○	○	○	○	○	○	○	○
How frightened of Harry would you feel?	○	○	○	○	○	○	○	○	○
If I were in charge of Harry's treatment, I would force him to live in a group home.	○	○	○	○	○	○	○	○	○
If I were a landlord, I probably would rent an apartment to Harry.	○	○	○	○	○	○	○	○	○
How much concern would you feel for Harry?	○	○	○	○	○	○	○	○	○

Appendix F: Informed Consent Document

INFORMED CONSENT DOCUMENT

Project Title: The Effects of the Type of Mental Disorders on Mental Health Stigma
Investigator: Kristina Peterson, B. S.; Psychology Department
kristina.conkright408@topper.wku.edu

You are being asked to participate in a project conducted through Western Kentucky University. The University requires that you give your agreement to participate in this project.

You must be 18 years old or older to participate in this research study.

The investigator will explain to you in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. You may ask any questions you have to help you understand the project. A basic explanation of the project is written below. Please read this explanation and discuss with the researcher any questions you may have. You should keep a copy of this form for your records.

1. **Nature and Purpose of the Project:** The purpose of this study is to examine what psychological factors contribute to judgments we make about other people.

2. **Explanation of Procedures:** Following consent for participation, there will be three pages consisting of demographics information and a questionnaire. The first page consists of reading a paragraph describing a person and answering 28 questions about the paragraph. The following pages will include demographic questions. This survey will take approximately 10 minutes to complete.

3. **Discomfort and Risks:** This study has minimal discomfort or risk. However, if you experience any discomfort, the researcher has provided a resource at the end of the study.

4. **Benefits:** Upon completion of this study, you will receive payment of $1.00.

5. **Confidentiality:** This survey does not require you to share information that could identify you later. Additionally, the data collected from this study will be stored securely on a password protected hard drive.

6. **Refusal/Withdrawal:** Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

Your continued cooperation with the following research implies your consent.

THE DATED APPROVAL ON THIS CONSENT FORM INDICATES THAT
THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD
Paul Mooney, Human Protections Administrator
TELEPHONE: (270) 745-2129

WKU IRB# 18-161
Approval - 2/7/2018
End Date - 6/30/2018
Expedited
Original - 11/2/2017

Appendix G: Debriefing Paragraph

Thank you for participating in this research study. All of the information received from this survey will be kept confidential. This study is evaluating the possibility of different levels of mental health stigma across mental disorders. Additionally, this study was concerned with evaluating the reliability of the Attribution Questionnaire in assessing mental health stigma. If you have any questions about this study please contact Kristina Peterson at kristina.conkright408@topper.wku.edu or her advisor Rick Grieve at rick.grieve@wku.edu. If you have experienced any discomfort upon completion of this survey, the Crisis Hotline (800-273-8255) is available 24 hours per day to refer you to the nearest available resources.