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Public Stigma and Self-Stigma of Depression in College Students

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Abstract

A large body of literature portrays the long-term, increased presence of mental illness stigma in college students, a vulnerable population at high risk of victimization. However, literature lacks sufficient research differentiating between the separate forms of mental illness stigma as well as consistent research examining stigma specific to the mental illness of depression in college students. A cross-sectional, web-based survey design was utilized to collect quantitative data from 432 students at a private, four-year university in the southeastern United States. The primary investigator both described the presence of and relationship between levels of perceived public stigma, personal public stigma, and self-stigma of depression in college students as well as the influence of religiosity, race/ethnicity, previous contact, and year of study on stigma levels. Three key findings were: (a) almost half of participants personally identified with the label of depression; (b) the university sample scored a low perceived public stigma level, moderate personal public stigma level, and moderate self-stigma level of depression; and (c) personal public stigma levels were influenced by race/ethnicity and previous contact. The finding of increased self-stigma in relation to an overall positive, campus-wide attitude suggested individually-held stigma might be a more significant barrier to overall mental health than societal stigma at the current university. Normalizing depression, increasing awareness and understanding in healthcare providers, and promoting exposure to depression could reduce public stigma at the individual level and inhibit the progression of self-stigma in students with depression.

Keywords: mental illness stigma, depression stigma, college students, university, perceived public stigma, personal public stigma, public stigma, self-stigma.

Introduction and Background

Stigma, defined as the relationship between "an attribute and a stereotype," refers to a characteristic considered "outside of the norm of a social unit" (Goffman, 1963; Stafford & Scott, 1986). Stigma can be further described as the summation of stereotypic perceptions, prejudicial attitudes, and discriminatory behaviors (Rusch, Angermeyer, & Corrigan, 2005). Three distinct forms of stigma arise from the presence of stereotypes, prejudice, and discrimination, including perceived public stigma, personal public stigma, and self-stigma (Corrigan, 2004; Eisenberg, Downs, Golberstein, & Zivin, 2009). The three forms of stigma remain multidisciplinary concepts, which can be applied to an array of circumstances (Phelan & Basow, 2007). Although stigma is not confined to mental illness, previous literature emphasizes the affinity for stigma to victimize people with mental illness (Corrigan et al., 2000; Rusch et al., 2005). Specifically, depression is one of the more stigmatized and labeled mental illnesses (Corrigan et al., 2000). However, conflicting scientific results contribute not only to the ambiguous nature of depression stigma, but also to inconsistent care for sufferers of depression (Corrigan et al., 2000; Phelan & Basow, 2007).

A multitude of theorists accepted the challenge of conceptualizing mental illness stigma in order to address the gaps of ambiguity (Corrigan et al., 2000; Link, Cullen, Struening, Shrout, & Dohrenwend, 1989; Ryan, 2007). Several theories elucidate the serial nature of the three forms of stigma by explaining the general public's tendency to blame people with depression and perceive them as responsible for their disability (Corrigan et al., 2000; Weiner, 1985). The perception of blame causes stigmatizing stereotypes to form in society and societal socialization potentiates the presence of perceived public stigma (Corrigan et al., 2000; Link et al., 1989; Link & Phelan, 2001; Weiner, 1985). Individual endorsement of the negative societal perceptions

related to depression can occur, which indicates the presence of personal public stigma (Corrigan et al., 2000; Link et al., 1989; Link & Phelan, 2001; Rusch et al., 2005; Weiner, 1985). Labeling, the separation of "us" from "them," occurs in individuals who identify with depression (Link et al., 1989; Link & Phelan, 2001; Mead, 1934). Labeling places individuals at risk for internalizing the stigmatizing attitudes and applying them to the self, which indicates the presence of self-stigma (Corrigan et al., 2000; Link et al., 1989; Link & Phelan, 2001; Mead, 1934; Rusch et al., 2005; Weiner, 1985).

College students are one of the many vulnerable populations at high risk of victimization from depression stigma, predominantly due to their abrupt change in lifestyle and the typical onset of mental illness occurring between the ages of 18 and 25 (Centers for Disease Control and Prevention [CDC], 2016; National Institute of Mental Health [NIMH], 2017). Literature supports the sequential nature of stigma development by suggesting the nationally high rates of both perceived and personal public stigma have augmented nationally high rates of self-stigma in college students (Corrigan, 2004; Corrigan, Watson, & Barr, 2006; Eisenberg et al., 2009; Fominaya, Corrigan, & Rusch, 2016; Lally, O'Conghaile, Quigley, Bainbridge, & McDonald, 2013). For example, researchers found when students perceived people with mental illness as dangerous and to blame for their illness, students consequentially preferred social distance from the people with mental illness (Brown, 2012; DeFreitas, Crone, DeLeon, & Ajayi, 2018; Kosyluk et al., 2016; Phelan & Basow, 2007). The presence of depression stigma is a serious issue because of its impact on the educational, social, and occupational functioning of students with depression (Breslau, Lane, Sampson, & Kessler, 2008; Eisenberg et al., 2009; Fominaya et al., 2016; Lally et al., 2013; Loya, Reddy, & Hinshaw, 2010). The "why-try" effect portrays the magnitude of stigma's impact on college students. The "why-try" effect suggests the presence of

stereotypes in the community cause the labeled individual to experience a low self-esteem, low self-efficacy, and sense of powerlessness, leading to the mindset of inevitable failure (Corrigan, Larson, & Rusch, 2009). For example, "Why even try to get a job? Why even try to be in a relationship? Why even try to live independently? I'm not worth it." The presence of perceived public stigma, personal public stigma, and self-stigma in college students results in loss of opportunities, loss of status, and loss of the ability to achieve life goals (Corrigan et al., 2009; Fominaya et al., 2016; Phelan & Basow, 2007).

Problem Statement

A large body of existing literature emphasizes the sequential nature of mental illness stigma, the upward trend of the presence of both public stigma and self-stigma of mental illness, the vulnerability of college students regarding victimization from mental illness stigma, and the negative impact of mental illness stigma on college students' success. However, existing literature lacks research involving the measurement of the three forms of stigma as separate entities; the measurement of the three forms of stigma specific to depression; the association between the presence of perceived public stigma, personal public stigma, and self-stigma specific to the population of college students; and consistent findings involving the influence of individual characteristics on the presence of depression stigma in college students (Barney, Griffiths, Christensen, & Jorm, 2010; Griffiths, Christensen, & Jorm, 2008; Lally et al., 2013).

Purpose

The primary aim of the current study was to describe the presence of and relationship between levels of perceived public stigma, personal public stigma, and self-stigma of depression in college students. The secondary aim of the current study was to describe the influence of

religiosity, race/ethnicity, previous contact, and year of study on levels of perceived public stigma, personal public stigma, and self-stigma of depression in college students.

Research Questions and Hypotheses

The primary investigator posed the following research questions: (a) What are the levels of perceived public stigma, personal public stigma, and self-stigma of depression in college students? (b) What is the relationship between levels of perceived public stigma and personal public stigma of depression in college students? (c) What is the relationship between levels of personal public stigma and self-stigma of depression in college students? (d) Are public stigma and self-stigma influenced by religiosity, race/ethnicity, previous contact, and year of study?

The primary investigator hypothesized the following: (a) the presence of increased levels of perceived public stigma, personal public stigma, and self-stigma of depression in college students, (b) a positive relationship between levels of perceived public stigma and personal public stigma of depression in college students, (c) a positive relationship between levels of personal public stigma and self-stigma of depression in college students, and (d) a hypothesis could not be made regarding the influence of religiosity, race/ethnicity, previous contact, and year of study on both public stigma and self-stigma.

Review of Evidence

Stigma

Stigma “is a characteristic of persons that is contrary to a norm of a social unit” (Stafford & Scott, 1986, p. 80), where a "norm" is defined as a "shared belief that a person ought to behave in a certain way at a certain time" (Stafford & Scott, 1986, p. 81). Stigma can be defined as an interaction of three components: stereotypes, prejudice, and discrimination (Rusch et al., 2005). Stereotypes are the general public’s collective beliefs about the characteristics of members of a

social group, allowing for the efficient organization of characteristic information (Hilton & Hippel, 1996). However, stereotyping often oversimplifies and disregards individual characteristics of members of a group by focusing on the most distinctive group features that provide the greatest differentiation between the stereotyped group and other groups (Ford & Stangor, 1992; Hilton & Hippel, 1996; Nelson & Miller, 1995). According to Devine (1989), one may have knowledge of the stereotypes held by the general public, while his or her own personal beliefs are not in accordance with the stereotypes. Therefore, prejudice only arises when the person agrees with the public's stereotypes, endorses them as their own, and consequentially develops negative, emotional reactions (attitudes) towards the stereotyped group (Devine, 1989; Hilton & Hippel, 1996). Lastly, the prejudicial attitudes lead to discriminative behavior; for example, fear leads to avoidance and anger leads to hostility (Rusch et al., 2005).

Stigma is often proffered as one concept, however several distinct forms of stigma can arise from the negativity mentioned above (Corrigan, 2004; Eisenberg et al., 2009). Public stigma is the negative stereotypes, prejudicial attitudes, and discriminatory behaviors held collectively by people in the community (Corrigan, 2004). Two types of public stigma exist: perceived public stigma and personal public stigma. Perceived public stigma is an individual's perception of public stigma (how they believe their community views the stigmatized group) (Corrigan, 2004; Kosyluk et al., 2016). Personal public stigma is an individual's own endorsement of the public stigma (how they personally view the stigmatized group) (Kosyluk et al., 2016). Another distinct form of stigma is self-stigma, which occurs when an individual identifies with the stigmatized group and applies the corresponding stereotypes, prejudices, and discriminations against his or her self (Corrigan, 2004; Eisenberg et al., 2009). Although the three stigmas are defined separately, they are likely to augment each other and develop

sequentially once perceived public stigma is present (Corrigan, 2004; Corrigan et al., 2006). Specifically, an individual becomes aware of the presence of public stigma in the community (perceived public stigma), develops their own opinions, which may or may not be in agreement with the community's opinions (personal public stigma), and then determines whether or not to apply the stigma to the self (self-stigma) (Eisenberg et al., 2009).

Evidence suggests stigma develops as a result of the public's motivation to understand their environment, constantly searching for the causality of outcomes, and adjusting individual actions and aspirations accordingly (Weiner, 1985). Specifically, a cause-and-effect relationship exists between causal perceptions related to stigma and the reactions and behaviors towards the stigmatized individual (Weiner, 1985). The perceived cause can be viewed as internal (originated within the person) or external (originated from external factors), controllable (affected by personal will or effort) or uncontrollable (not affected by personal will or effort), and stable (irreversible) or unstable (reversible) (Ryan, 2007). If an individual thinks the cause is internal, controllable, and unstable, the reactions will be more negative, full of anger and blame and lacking pity, and the behavior will be neglectful (Weiner, Perry, & Magnusson, 1988). Alternatively, if the cause is thought to be external, uncontrollable, and stable, the reactions will be more positive, full of pity and lacking anger and blame, and the behavior will be helpful (Weiner et al., 1988).

Stigma of Mental Illness

The cause-and-effect nature of stigma development provides a means to examine stigma specific to mental illness and was tested at both a Californian and Chicagoan university (Corrigan et al., 2000). The results showed a pattern in the correlations between the stigma source of mental-behavioral origin, perceived controllability and stability, and affective reactions

and behaviors. Stigma of physical (somatic) origin, such as blindness and paraplegia, was perceived as uncontrollable, stable, and of external causality, therefore the disabled individual was liked, pitied, and likely to receive assistance (Weiner et al., 1988). Alternatively, stigma of mental-behavioral origin, such as drug-abuse, PTSD, and obesity, was perceived as controllable, unstable, and of internal cause, therefore the disabled individual was less liked, less pitied, and less likely to receive assistance (Weiner et al., 1988). Researchers found higher stigmatizing perceptions, reactions, and behaviors towards psychiatric diagnoses than physical diagnoses (Corrigan et al., 2000). Mental illnesses, such as depression and cocaine addiction, were perceived as controllable and unstable while physical illness, such as cancer, was perceived as uncontrollable and stable (Corrigan et al., 2000).

In accordance with the general public's tendency to negatively perceive persons with mental illness, the public often utilizes labeling to socially separate the stigmatized group from other groups in the community (Rusch et al., 2005). The separation leads to the belief that "they" are different from "us" and "they" actually *are* their label (Link & Phelan, 2001; Rusch et al., 2005). For example, a person with schizophrenia is commonly referred to as "a schizophrenic", indicating they *are* their disease and are one of "them" and not one of "us" (Link & Phelan, 2001; Rusch et al., 2005). Alternatively, a person who has cancer is commonly referred to as "a person with cancer," indicating they are still part of "us" but with an individual attribute that falls within the norm (Link & Phelan, 2001; Rusch et al., 2005).

Although stigma is not confined to mental illness, the literature portrays the co-occurring stereotyping, prejudicial attitudes, discriminatory behaviors, identity labeling, and identity separation interact to stigmatize people with mental illness (Corrigan et al., 2000; Link & Phelan, 2001; Rusch et al., 2005). A body of evidence exists and supports the long-term presence and

current significance of mental illness stigma. The US. Department of Health and Human Services (USDHHS) portrays the perseverance of mental illness stigma by explaining how the U.S. Surgeon General labeled mental illness stigma as a public health issue, stigma growing to be one of the most prominent barriers to effective mental health care in the 1990s (USDHHS, 1999). In 2009, the CDC completed a study to determine the presence of mental illness stigma in 35 states in the U.S. While most adults (>80%) agreed mental illness awareness and treatment are effective, anywhere from 35%-67% of adults, varying from state-to-state, agreed most people are uncaring and unsympathetic towards people with mental illness (CDC et al., 2012). Tennessee, alone, had a staggering 50% of adults suffering from psychological distress who felt others were strongly unsympathetic, uncaring, and unsupportive towards their illness (CDC et al., 2012).

Stigma of Mental Illness in College Students

Among the 46.6 million U.S. adults who had a mental illness diagnosis in 2017, young adults between the ages of 18 and 25 obtained the highest prevalence, accounting for 25.8% (NIMH, 2017). Researchers found one-half of mental illness begins by age 14 and three-quarters begins by age 24 (American Psychiatric Association [APA], 2018). According to the CDC (2016), college students experience an abrupt change in lifestyle that increases the incidence (if not previously diagnosed) or severity (if previously diagnosed) of mental illness. The lifestyle changes include social and sexual pressures; the temptation of readily available illicit drugs, alcohol, and unhealthy dieting; inadequate sleep challenges; and increased stress and pressure from balancing school, work, a social life, athletics, and leadership positions (CDC, 2016). Due to college students' age and lifestyle changes, college students are a population at risk for experiencing challenges related to mental illness, such as symptoms and disabilities resulting

from the disease, and challenges related to the stereotypes, prejudice, and discrimination towards mental illness (Corrigan & Watson, 2002).

Perceived Public Stigma and Personal Public Stigma

Evidence suggests high rates of both perceived public stigma and personal public stigma exist at universities and a positive correlation exists between the two forms of public stigma (Eisenberg et al., 2009; Lally et al., 2013). When observing perceived public stigma at universities, researchers found an increased presence of labeling, specifically the label of *mentally ill,* to be a strong predictor of increased stereotyping (Phelan & Basow, 2007). Consequentially, personal public stigma was seen in students at these universities, specifically the perceptions of dangerousness surrounding those with mental illness and feelings of anxiety when interacting with the stigmatized individuals (Brown, 2012; DeFreitas et al., 2018; Kosyluk et al., 2016; Phelan & Basow, 2007). Researchers found the stigmatizing attitudes led to discriminatory behavior, specifically the preference of social distancing from the students with mental illness (Brown, 2012; DeFreitas et al., 2018; Kosyluk, 2016; Phelan & Basow, 2007). Social distancing often leads to poor outcomes in the stigmatizing students, such as decreased engagement on campus and poor relationship development (Kosyluk et al., 2016; Loya et al., 2010; Salzer, 2012).

Researchers found high student levels of personal public stigma had negative impacts in addition to social distancing. Students who obtained personal public stigma were less likely to perceive the need to seek treatment, less likely to seek medication therapy, less likely to seek psychotherapy or counseling, and less likely to believe the benefits of help-seeking on psychological and interpersonal problems (Eisenberg et al., 2009; Gaddis, Ramirez, & Hernandez, 2018; Lally et al., 2013; Loya et al., 2010). A higher personal public stigma score

was associated with a lower likelihood of seeking both formal help (counselor or psychiatrist) and informal help (friends, family, or roommate), but findings showed students reported that *if* they were to seek treatment, they were more willing to seek informal help than formal help (Gaddis et al., 2018; Kosyluk et al., 2016). Students with high levels of personal public stigma were less likely to perceive a need for and seek treatment for a psychological problem because they preferred to deal with their problems alone, believed high stress was normal, and didn't think the psychological distress was serious (Eisenberg, Speer, & Hunt, 2012).

A need exists for the measurement of perceived and personal public stigma as separate entities. Likewise, because college students often experience the first onset of mental disorders during their university experience, it remains important to consider both perceived public stigma and personal public stigma in all college students, regardless of his or her current mental health status (Eisenberg et al., 2009; Eisenberg, Golberstein, & Gollust, 2007; Griffiths et al., 2008; Lally et al., 2013).

Self-stigma

Existing literature reports a positive correlation between the presence of public stigma and the presence of self-stigma at universities, which has impacted educational, social, and occupational functioning of students (Breslau et al., 2008; Fominaya et al., 2016; Loya et al., 2010). For example, researchers found self-stigma causes low self-esteem, low self-efficacy, social status loss, coercion, feelings of rejection and exclusion, and loss of opportunities, such as job discrimination (Corrigan et al., 2009; Fominaya et al., 2016; Phelan & Basow, 2007). Likewise, National Alliance on Mental Illness (NAMI) (2012) found an increasing number of college students diagnosed with mental illness disorders are dropping out of college due to lack of mental health support, are not disclosing their mental illness diagnosis strictly due to the belief

that their university's public stigma is high, and are fearful for how other's perceptions would change about the individual if they did disclose their disease (Zolezzi, Bensmail, Zahrah, Khaled, & El-Gaili, 2017). Lastly, existing literature suggests students with a high self-stigma score are less likely to report suicidal ideations or self-injurious incidents, less likely to disclose the use of anti-depression or anti-anxiety medications, and much less likely to seek help, from both a formal support and informal support system (Gaddis et al., 2018; Musada, Anderson, & Edmonds, 2012; Wang, Huang, Jackson, & Chen, 2012).

A need exists for a more structured and comprehensive approach when examining self-stigma, specifically in college students (Barney et al., 2010). Self-stigma lacks emphasis in existing literature, predominantly because of the absence of a clear demarcation between public stigma and self-stigma, causing many researchers to combine the two concepts upon measurement (Barney et al., 2010; Griffiths et al., 2008). Likewise, current self-stigma measurement tools do not have sufficiently strong foundations in the constructs of self-stigma nor do the tools accurately represent the full breadth and domain of self-stigma; the lack is primarily due to the misconceptions of stigma and incomplete understanding by researchers (Barney et al., 2010; Corrigan & Watson, 2002). An adequate measurement of self-stigma reflects the views and experiences of people in the community and provides a structured and comprehensive approach to accurately represent the underlying constructs of self-stigma (Barney et al., 2010).

Stigma of Depression

In 2015, over 322 million people were living with depression, the leading cause of disability in the U.S. among people ages 15-44 (Ritchie & Roser, 2018). Unfortunately, the investigation of depression stigma has produced conflicting results. For example, some found

greater depression stigma among older people while others found greater depression stigma among younger people (Roeloffs et al., 2003; Sirey et al., 2001). Likewise, some found major depression as the most likely diagnosis to be labeled as *mentally ill*, while others found depression to be considered the most benign, with the belief that it is more like a physical disorder than a psychological disorder (Corrigan et al., 2000; Phelan & Basow, 2007).

The disparities in findings may be the result of the use of different, inconsistent populations not allowing the results to be generalizable (Griffiths et al., 2008). The inconsistent findings are also thought to be the result of the lack of measurement tools targeting depression specifically, most scales targeting mental illness as a whole (Barney et al., 2010). A need exists for the measurement of both public stigma and self-stigma associated with depression. Filling the gap in literature could aid in targeting and modifying destigmatization efforts to reduce stigma in people with depression (Griffiths et al., 2008).

Influencing Factor of Religion

Existing literature reports a positive correlation between a higher level of religiosity and the presence of personal public stigma of mental illness (Eisenberg et al., 2009). In a study of 735 students who obtained high levels of public stigma, almost 50% stated they felt the need to seek help for an emotional disorder in the last year, but only one student stated they would seek help from a religious counselor or religious service (Lally et al., 2013). Alternatively, Gaddis et al. (2018) found a high level of perceived public stigma to be associated with a higher likelihood of seeking informal help, more students preferring guidance from a religious group than from a family or friend. The specificity of the correlation between religiosity and public and self-stigma specific to depression is unclear.

Influencing Factor of Race/Ethnicity

Existing literature portrays the presence of a correlation between race/ethnicity and the presence of perceived public stigma, personal public stigma, and self-stigma of mental illness in college students. Researchers found Caucasian students obtained the lowest perceived public stigma among all racial/ethnic groups; Black students obtained the highest perceived public stigma; Latino students obtained lower perceived and personal public stigma than Black students; Chinese students obtained high perceived and personal public stigma; and Asian students obtained the highest personal public stigma among all racial/ethnic groups (Corrigan et al., 2015, Defreitas et al., 2018; Eisenberg et al., 2009; Loya et al., 2010; Wang et al., 2012). However, researchers found Caucasian students to obtain higher levels of self-stigma amongst all racial/ethnic groups, but with a greater intent to join disclosure programs and a more positive outlook on help-seeking (Corrigan et al., 2015; Loya et al., 2010). The specificity of the correlation between race/ethnicity and public and self-stigma specific to depression is unclear.

Influencing Factor of Previous Contact

Existing literature portrays a correlation between the presence of a student's previous contact with a person with mental illness and the presence of perceived public stigma and personal public stigma. For example, researchers found students lacking personal contact with a person with mental illness to be associated with higher personal public stigma, indicating a higher level of familiarity to be associated with a lower level of stigma, a lesser desire for social distancing, and decreased perceptions of dangerousness (NAMI, 2012; Phelan & Basow, 2007). Specifically, students who had previous contact with a friend of the family with mental illness desired the least social distance from students with mental illness (Brown, 2012). The specificity of the correlation between previous contact and public and self-stigma specific to depression is unclear.

Influencing Factor of Year of Study

Existing literature provides minimal evidence regarding the association between mental illness stigma and year of study. Several studies reveal a positive correlation between high personal public stigma levels and younger graduate status, specifically first and second year undergraduate students (Eisenberg et al., 2009; Lally et al., 2013). However, several studies lack a representative sample of graduate students, potentially explaining the divide in stigma levels amongst undergraduate and graduate students. The specificity of the correlation between year of study and public and self-stigma specific to depression is unclear.

A thorough understanding of the conceptual underpinnings of stigma is required to accurately measure stigma presence with representation of its full domain (Corrigan & Watson, 2002). Stigma can be defined as the interaction of stereotypic perceptions, prejudicial attitudes, and discriminatory behavior (Rusch et al., 2005). Three distinct forms of stigma can arise from the three concepts, perceived public stigma and personal public stigma in the general population and self-stigma in the stigmatized population (Corrigan, 2004; Eisenberg et al., 2009). College students exist at high risk for mental illness stigma because of the impact on students' educational, social, and occupational functioning (Breslau et al., 2008; Eisenberg et al., 2009; Fominaya et al., 2016; Lally et al., 2013; Loya et al., 2010).

Researchers desire more evidence regarding the three forms of stigma specific to depression in college students. The modified labeling theory addresses the gaps in literature by providing knowledge of stigma progression in the general population of college students, increasing awareness of the presence of stigma in college students, and elucidating the negative consequences of stigma in college students who identify with depression.

Theoretical Model

The current study utilized the modified labeling theory to examine the progression of depression stigma because the theory posits three distinct forms of stigma augment one another and develop sequentially once perceived public stigma is present (Corrigan, 2004; Corrigan, et al., 2006). The modified labeling theory suggests the stigmatization process includes five steps—stigma development, labeling, response, consequence, and vulnerability. Refer to Figure 1 for a visual depiction of the modified labeling theory specific to depression stigma.

Step 1: Development of perceived public stigma and personal public stigma. A modified labeling approach suggests societal conceptions exist, representing the attitude of the community towards people with mental illness (Link et al., 1989). The societal conceptions include two components: devaluation (the extent to which a person with mental illness will be discredited and lose their status) and discrimination (the extent to which a person with mental illness will be socially isolated). Perceived public stigma arises during socialization when individuals become aware of community attitudes; for example, an individual believes "most people" devalue and discriminate against people with mental illness (Link et al., 1989; Mead, 1934). Personal public stigma arises when the individual endorses societal conceptions as their own beliefs; for example, "I" devalue and discriminate against people with mental illness (Link et al., 1989).

Step 2: Development of self-stigma. The modified labeling approach suggests once personal public stigma exists in an individual, the individual is at risk for being officially labeled (Link et al., 1989). A person who does not identify with the stigmatized mental illness will not perceive a personal relevance to the stigmatizing views, will not become labeled, will not internalize feelings of discrimination and devaluation, and therefore will not develop self-stigma (Corrigan, 2004; Link et al., 1989). However, a person who does identify with the stigmatized mental illness will perceive a personal relevance to the stigmatizing views, will become labeled,

will internalize feelings of discrimination and devaluation, and therefore will develop self-stigma (Link et al., 1989).

Step 3: Responses to stigmatizing status. The modified labeling theory espouses a person who did not develop self-stigma in step two will have no reactions related to labeling, however a person who did develop self-stigma in step two will have reactions related to labeling due to the perception of stigmatization as a threat (Link et al., 1989). The theory posits the individual with self-stigma can respond to labeling in three possible ways: secrecy, concealing their diagnosis and treatment from others; withdrawal, socially isolating themselves from others; or preventative telling, educating others about mental illness in hopes of enlightening them to avoid negative attitudes (Goffman, 1963; Link et al., 1989; Schneider & Conrad, 1980).

Step 4: Consequences of the stigma process. The modified labeling theory suggests if an individual believes others will discriminate and devalue them for their stigma status, negative outcomes may arise (Link et al., 1989). Negative outcomes include feelings of shame, low self-esteem, and social inadequacy (Barney et al., 2010; Link et al., 1989; Scheff, 1984).

Step 5: Vulnerability to future disorder. The modified labeling theory suggests if the stigma progression process completes and negative consequences ensue, the individual might be impacted on a social, educational, and occupational level (Breslau et al., 2008; Link et al., 1989). The consequences induce a state of vulnerability, increasing the likelihood of obtaining a new mental illness or experiencing an exacerbation of the current mental illness (Link et al., 1989).

To summarize, the 5-step process of the modified labeling theory includes the development of perceived public stigma and personal public stigma, the development of self-stigma, the responses to stigmatizing status, the consequences of the stigma process, and vulnerability to future disorders (Link et al., 1989). The modified labeling theory provided an

appropriate theoretical framework for the current study to examine stigma specific to depression for multiple reasons. First, the modified labeling theory conceptualizes public stigma as the presence of discrimination and devaluation; these two concepts were used to measure the presence of public stigma specific to depression in college students. Second, the modified labeling theory acknowledges personal public stigma as a separate entity, while maintaining the belief that it results from the presence of perceived public stigma. The current study not only measured personal public stigma as a separate concept, but also measured its existence in relation to the presence of perceived public stigma. Third, the modified labeling theory demonstrates the negative consequences resulting from the presence of self-stigma, such as a low self-esteem and social inadequacy. The current study measured self-stigma of depression by addressing the presence of four negative consequences, including shame, self-blame, social inadequacy, and help-seeking inhibition (Barney et al., 2010). Fourth, the modified labeling theory suggests a positive correlation between the presence of personal public stigma and self-stigma; the current study examined the relationship between the two forms of stigma.

Design

The current study used a cross-sectional, web-based survey design to collect quantitative data from college students. The cross-sectional design was appropriate for this study due to its ability to measure outcomes and exposure variables at one point in time (Setia, 2016). Likewise, the cross-sectional design utilizing a web-based survey allowed for the quick, convenient, and cost-effective collection of data, suitable for the current study's aim of measuring a multitude of variables in a brief period of time. The design was utilized because of the potential to provide meaningful information on depression stigma, contribute to existing literature, and operate in future research studies, such as a cohort study (Setia, 2016).

Through in-person recruitment, primary data was collected from college students, who voluntarily completed a web-based survey constructed from two appropriate, validated tools. The current study was verified as exempt by the Institutional Review Board (IRB) of the university at which the study was conducted.

Clinical Setting

The current study took place at a private, medium-sized, four-year university in the southeastern United States, described as a "Christian community with a rich Baptist heritage" ("Belmont," n.d.). The religious nature of the community inspired the primary investigator to analyze religiosity at the university. The university enrolls over 8,300 students representing every U.S. state and more than 36 countries, with approximately 6,700 undergraduate students and 1,600 graduate students ("Belmont," n.d.). Specifically, participants were recruited at multiple locations throughout the university campus, including the cafeteria, fitness and recreation center, multiple academic buildings, and the university pharmacy. The university pharmacy, an on-campus, student-run pharmacy serving students, faculty, and staff, provided the primary investigator with access to college students receiving pharmacological treatment for depressive symptoms ("Belmont," n.d.). Additional benefits of recruiting in the university pharmacy included cooperative, supportive personnel and the use of a consultation room, if desired.

Project Population

A participant sample was taken from the enrolled university students, who met the inclusion criteria of current enrollment at the university, graduate students, and undergraduate students. Exclusion criteria included non-students (faculty, staff, or visitor) and students who lacked current enrollment at the university. The primary investigator implemented convenience

sampling to recruit students who were easily accessible at the time of recruitment, primarily because it was inexpensive, efficient, and simple to execute.

The primary investigator performed a power analysis to determine the desired sample size for the current study. Previous studies suggested small effect sizes for public stigma and self-stigma outcomes, specifically effect sizes of 0.2 or less (Barney et al., 2010; Corrigan, Morris, Michaels, Rafacz, & Rusch, 2012; Fominaya et al., 2016; Kosyluk et al., 2016; Lally et al., 2013). The current study employed a slightly larger effect size of 0.3 to attain a more realistic and achievable sample size goal of approximately 350 total participants.

The sample recruitment strategy involved the direct engagement of human subjects. The primary investigator directly recruited the participants on campus by 1) screening for eligibility based on the inclusion and exclusion criteria and 2) asking the individual to complete the anonymous, web-based survey. All participants voluntarily participated, were fully informed of the study, and provided implied consent through the completion and submission of the survey.

Sources of Data/Data Collection Instruments

The current study utilized a number of instruments to measure the research variables. The web-based survey initially asked each participant a single item to determine whether the student identified with the label of depression [Have you ever or do you currently suffer from depression?]. The dichotomous answers determined which questionnaire the participant received. If the participant answered “no,” indicating they do not identify with the label of depression, the participant received a questionnaire measuring the presence of perceived public stigma and personal public stigma specific to depression. If the participant answered “yes,” indicating they do identify with the label of depression, the participant received a questionnaire measuring the presence of self-stigma specific to depression.

Perceived public stigma was measured using a common adaptation of Link and colleagues 12-item Devaluation-Discrimination (D-D) scale, which assessed the individual's extent of agreement with statements indicating most people devalue and discriminate against someone with a mental illness (Eisenberg et al., 2009; Lally et al., 2013). A multitude of researchers adapted the scale to measure stigma regarding a broader concept of mental illness treatment, rather than limited to institutional treatment. Previous studies reported the adapted scale obtained high internal consistency between 0.86 and 0.89 (Eisenberg et al., 2009; Lally et al., 2013).

Personal public stigma was measured with three adapted items from the D-D scale to assess the individual's own devaluation and discrimination against someone with mental illness (Eisenberg et al., 2009; Lally et al., 2013). The three adapted items adjusted the wording from "Most people…" to "I…" (Eisenberg et al., 2009). This adjustment resulted in a moderately high internal consistency of 0.78 when previously employed by multiple researchers (Eisenberg et al., 2009; Lally et al., 2013).

The current study further modified both D-D scales by adjusting the wording to refer to stigma specific to depression, a revision previously employed by Brown et al. (2011) who predicted perceptions about depression and other mental illnesses might differ. For example, "a person who received mental illness treatment" was adapted to "a person who received depression treatment." Refer to APPENDIX A and APPENDIX B. Both scales' responses were coded on a 6-point Likert scale. Positively worded questions ranged from *strongly agree* (coded as 1) to *strongly disagree* (coded as 6), while negatively worded questions were reverse-scored and ranged from *strongly agree* (coded as 6) to *strongly disagree* (coded as 1). An index of perceived public stigma and personal public stigma was constructed by calculating average scores across

scale items, therefore each individual received one perceived public stigma score and one personal public stigma score. Both scales achieved a total score between one and six, where higher scores indicated the presence of higher stigma (Eisenberg et al., 2009).

Self-stigma was measured using the Self-Stigma of Depression Scale (SSDS), a 16-item scale that conceptualizes self-stigma of depression as the presence of four facets: shame, self-blame, social inadequacy, and help-seeking inhibition (Barney et al., 2010). Refer to APPENDIX C. The scale resulted in a high internal consistency of 0.87 and the presence of test-retest reliability (Barney et al., 2010). Responses were coded on a 5-point Likert scale. Negatively worded questions ranged from *strongly agree* (coded as 5) to *strongly disagree* (coded as 1), while positively worded questions were reverse-scored and ranged from *strongly agree* (coded as 1) to *strongly disagree* (coded as 5). The four self-stigma facets were represented by four questions per facet, each facet obtaining a possible range of scores between 4 and 20 (Barney et al., 2010). An index of self-stigma was constructed by summing the four facet scores to achieve a total score between 16 and 80, where higher scores indicated the presence of higher stigma (Barney et al., 2010).

Religiosity, race/ethnicity, previous contact, gender, and year of study were measured using individual items. Religiosity responses were coded on a 4-point Likert scale, including *Not at all religious* (coded as 1), *Not too religious* (coded as 2), *Fairly religious* (coded as 3), and *Very religious* (coded as 4) (Eisenberg et al., 2009). Race/ethnicity responses were measured using the following categories: *Asian, Black/African, Hispanic/Latino, Caucasian, Native American, Pacific Islander, Mixed Race,* and *Other* (ranging from *Asian*, coded as 1, to *Other*, coded as 8) (Eisenberg et al., 2009). Previous contact [Have you ever had previous contact with a person with depression?] responses were coded as *Yes* (coded as 1) and *No* (coded as 2). Gender

responses were coded using the following categories: *Male* (coded as 1), *Female* (coded as 2), and *Other* (coded as 3). Lastly, year of study determined current year and graduate status with responses ranging from *1st year undergraduate student* (coded as 1) to *5th year or higher graduate* student (coded as 10) (Eisenberg et al., 2009).

Data Collection Process/Procedures

A pilot was performed prior to performance of the full-scale project implementation in order to receive feedback on survey feasibility, duration, and potential improvements. Twelve eligible students participated in and provided feedback during the pilot study. No changes were made to the web-based survey.

The current study collected primary data from eligible individuals over a two-month time period in fall semester of 2019. The primary investigator collected data at multiple campus sites during morning, lunch, and afternoon intervals to accommodate the university's extensive class schedule. To accommodate pharmacy closures during student breaks, the primary investigator collected data at the university's pharmacy in the second month of data collection. Collection occurred during facility hours, which were as follows: Monday through Friday when classes were in session (8:00 am to 6:00 pm) and during student breaks (8:00 am to 4:30 pm) and Saturday when classes were in session (8:00 am to 12:00 pm) ("Belmont," n.d.).

The data collection process proceeded as follows. First, the primary investigator directly approached people at the on-campus, recruitment sites mentioned above. Second, the primary investigator invited eligible students to participate in the study utilizing a re-ordered IRB-approved recruitment script. Third, the student agreed to take the web-based survey. Fourth, the participant accessed the online survey utilizing either the iPhone camera application to scan an anonymous QR code or the Android text-messaging application to click on the anonymous

survey link. For the Android-owning participants, the primary investigator texted the anonymous link to the participant by allowing the participant to, first, type their own phone number into the primary investigators phone, second, click “send” on the primary investigators phone and, third, entirely delete the text message on the primary investigators phone to ensure anonymity of the participant’s personal information. Fifth, participants completed and submitted survey responses on personal electronic devices in the place and time of their choosing. Lastly, survey response data was stored in Qualtrics online survey software and exported into SPSS software for data analysis. The primary investigator applied Qualtrics online survey software settings to reduce the risk of repeat submissions.

Statistical Analysis.

The primary investigator randomly recruited 704 students from the university’s full population. Of the 704 recruited students, 432 participated in the study, yielding a 61.4% response rate. Of the 432 students who participated, 208 identified with the label of depression, 220 did not identify with the label of depression, and four did not respond to the labeling measure. A total of 31 students had missing responses for the stigma scales or other key measures. Missing responses ranged from 2.9% to 3.8% for individual items on the self-stigma scale, ranged from 4.1% to 8.2% for individual items on the perceived public stigma scale, and were 8.2% for individual items on the personal public stigma scale. A total of 401 students, representing a response rate of 57%, achieved complete data utilized in the statistical analysis.

Prior to hypotheses testing, the variables of religiosity, race/ethnicity, and year of study were dichotomized to allow the primary investigator to compare two samples across a single variable. The dichotomized variables included the following: low religiosity, high religiosity, Caucasian, non-Caucasian, undergraduate student, and graduate student. Self-stigma was

assumed normal because of a non-significant Shapiro-Wilk p-value (p = .051), the presence of a bell-shaped curve and normal Q-Q plot, and the absence of outliers. Likewise, perceived public stigma was assumed normal because of a non-significant Shapiro-Wilk p-value (p = .703), the presence of a bell-shaped curve and normal Q-Q plot, and the absence of outliers. Therefore, independent samples t-tests were chosen to examine whether mean levels of both self-stigma and perceived public stigma differed among participants across religiosity, race/ethnicity, and year of study as well as whether mean levels of perceived public stigma differed among participants across previous contact. The mean levels of self-stigma across previous contact were not tested because of the small sample of students who reported having no previous contact (n = 2).

Personal public stigma was not assumed normal because of a significant Shapiro-Wilk p-value (p < .001), the absence of a bell-shaped curve and normal Q-Q plot, and the presence of outliers. Therefore, Mann-Whitney U-tests were chosen to examine whether the median level of personal public stigma differed among participants across religiosity, race/ethnicity, year of study, and previous contact. All statistical tests were two-sided and all analyses were conducted using Statistical Packaging for Social Sciences 25.0 for Mac.

Results

The sample characteristics are shown in Table 1. The sample (N = 401) included 49.9% (n = 200) participants who identified and 50.1% (n = 201) participants who did not identify with the label of depression. The sample included 35.4% (n = 142) participants with low religiosity and 64.6% (n = 259) participants with high religiosity. The racial/ethnic composition was 15.2% (n = 61) non-Caucasian and 84.8% (n = 340) Caucasian. The sample included 97.3% (n = 390) of participants who had previous contact and 2.7% (n = 11) who did not have previous contact with a person with depression. The gender composition was 18% (n = 72) male, 81.8% (n = 328)

female, and 0.2% (n = 1) other. The sample included 64.1% (n = 257) undergraduate and 35.9% (n = 144) graduate students.

Levels of self-stigma by sample characteristics are shown in Table 2 and Table 3. SSDS scores ranged between 16 and 80. Of the 200 students who obtained self-stigma scores, the minimum stigma score was 35, maximum stigma score was 79, and mean level of self-stigma was 59.1 (SD = 9.25). The primary investigator did not find strong evidence in the sample for a difference in self-stigma levels across religiosity, race/ethnicity, or year of study. The level of self-stigma was the same in students with low religiosity (n = 77, M = 59.1, SD = 10.8) and students with high religiosity (n = 123, M = 59.1, SD = 8.22), $t(131) = 0.019$, $p = .99$, $d = 0.003$. Levene's test indicated unequal variances (F = 8.35, p = .004), so degrees of freedom were adjusted from 198 to 131. Non-Caucasian (n = 26, M = 59.7, SD = 10.2) students obtained a slightly higher level of self-stigma than Caucasian (n = 174, M = 59, SD = 9.13) students, $t(198) = -0.35$, $p = .73$, $d = 0.07$. Undergraduate (n = 138, M = 58.8, SD = 9.22) students obtained a lower level of self-stigma than graduate (n =62, M = 59.8, SD = 9.35) students, $t(198) = -0.71$, $p = .48$, $d = 0.11$.

Levels of perceived public stigma by sample characteristics are shown in Table 2 and Table 3. The 12-item D-D scale scores ranged between one and six. Of the 201 students who obtained perceived public stigma scores, the minimum stigma score was one, maximum stigma score was 4.67, and mean level of perceived public stigma was 2.84 (SD = 0.72). The primary investigator did not find strong evidence in the sample for a difference in levels of perceived public stigma across religiosity, race/ethnicity, previous contact, or year of study. Students with low religiosity (n = 65, M = 2.81, SD = 0.72) obtained a lower level of perceived public stigma than students with high religiosity (n = 166, M = 2.86, SD = 0.73), $t(199) = -0.44$, $p = .66$, d =

0.066. Non-Caucasian (n = 35, M = 2.96, SD = 0.56) students obtained a higher level of perceived public stigma than Caucasian (n = 166, M = 2.82, SD = 0.75) students, $t(199) = -1.07$, $p = .29$, 95% $d = 0.22$. Students who reported previous contact (n = 192, M = 2.83, SD = 0.73) obtained a lower level of perceived public stigma than students who reported no previous contact (n = 9, M = 3.18, SD = 0.48), $t(199) = -1.43$, $p = .15$, $d = 0.57$. Undergraduate (n = 119, M = 2.78, SD = 0.72) students obtained a lower level of perceived public stigma than graduate (n = 82, M = 2.93, SD = 0.71) students, $t(199) = -1.39$, $p = .17$, 95% $d = 0.2$.

Levels of personal public stigma by sample characteristics are shown in Table 4 and Table 5. The 3-item D-D scale scores ranged between one and six. Of the 201 students who obtained personal public stigma scores, the minimum stigma score was one, maximum stigma score was four, and median level of personal public stigma was 1.33. The primary investigator did not find strong evidence in the sample for a difference in the levels of personal public stigma across religiosity or year of study. The personal public stigma level was the same in students with low religiosity (n = 65, Mdn = 1.33) and students with high religiosity (n = 136, Mdn = 1.33), $U = 4105$, $p = .4$, $r = -.042$. The personal public stigma level was the same in undergraduate (n = 119, Mdn = 1.33) students and graduate (n = 82, Mdn = 1.33) students, $U = 4313$, $p = .15$, $r = -.073$. The primary investigator found strong evidence in the sample for a difference in the levels of personal public stigma across race/ethnicity and previous contact. Non-Caucasian (n = 35, Mdn = 1.67) students obtained a higher level of personal public stigma than Caucasian (n = 166, Mdn = 1.33) students, $U = 2173.5$, $p = .015$, $r = -.12$. Students who reported previous contact (n = 192, Mdn = 1.33) obtained a lower level of personal public stigma than students who reported no previous contact (n = 9, Mdn = 2), $U = 556.5$, $p = .06$, $r = -.09$.

Discussion

Key Findings

The primary aim of the current study was to describe the presence of and relationship between levels of perceived public stigma, personal public stigma, and self-stigma of depression in college students. The secondary aim of the current study was to describe the influence of sample characteristics on stigma levels.

Prior to discussing the current findings, it is necessary to address a limitation inhibiting the clear interpretation of stigma scores. Apart from the directive stating higher scores indicate higher stigma levels, a definitive technique to interpret the quantitative stigma scores from the SSDS and D-D scales does not yet exist. The minimal research utilizing the SSDS and the abundant research utilizing the D-D scale addressed their findings as either "increased/higher" or "decreased/lower" stigma scores (Barney et al., 2010; Eisenberg et al., 2009; Lally et al., 2015; Loya et al., 2010; Vogel, Wade, & Hackler, 2007). Researchers lack a clear definition of "low," "moderate," and "high" stigma scores. To address this gap in literature and provide meaning to the current findings, the primary investigator utilized previous SSDS and D-D scale scores to create reference ranges that provided a clear demarcation of "low," "moderate," and "high" scores. Scores less than one standard deviation below the mean were defined as "low" stigma scores, scores equal to and between one standard deviation below and one standard deviation above the mean were defined as "moderate" stigma scores, and scores greater than one standard deviation above the mean were defined as "high" stigma scores.

Using the SSDS, Barney et al. (2010) found a mean self-stigma score of 58.46 (*SD* = 9.66) in a sample of 1,312 college students. Therefore, applying the method of using standard deviations to develop low, moderate, and high classifications, the SSDS reference ranges included a low score of less than 48.8, a moderate score equal to or between 48.8 and 68.12, and

a high score of greater than 68.12. Using the 12-item D-D scale, Kroska and Harkness (2006) found a mean perceived public stigma score of 4.28 (*SD* = 0.63) in a sample of 226 college students. Similarly, the 12-item D-D scale reference ranges included a low score of less than 3.65, a moderate score equal to or between 3.65 and 4.91, and a high score of greater than 4.91. Eisenberg et al.'s (2009) 3-item D-D scale mean score was adjusted to become comparable to the current study's score, due to the previous researchers use of an alternate coding system. The adjusted mean personal public stigma score was 2.01 (*SD* = 0.84) in a sample of 5,555 students. Using the same method, the 3-item D-D scale reference ranges included a low score of less than 1.17, a moderate score equal to or between 1.17 and 2.85, and a high score of greater than 2.85.

In the current study of a random sample of 401 college students at a southeastern university, there were three key findings: (a) almost half of participants personally identified with the label of depression; (b) the university scored varying levels of perceived public stigma, personal public stigma, and self-stigma of depression; and (c) personal public stigma levels were influenced by race/ethnicity and previous contact.

Label of Depression

Of the 401 college students who completed the survey, 200 (49.9%) students identified with the label of depression. The current university's student sample achieved an increased percentage of depression when compared to the annual prevalence of 41.1% of college students with depression in a large 2016 study representing approximately 529 universities serving over 6,308,747 college students world-wide (Association for University and College Counseling Center Directors [AUCCCD], 2016). This finding was consistent with reports that revealed young adults between the ages of 18 and 25 obtain the highest prevalence of mental illness

diagnoses in the U.S., most obtaining symptomatic onset during college years (APA, 2018; CDC, 2016; NIMH, 2017).

Additionally, the key finding strengthened the existing body of literature regarding labeling and secondary consequences for college students. The employment of instruments accurately representing the construct of labeling was an advantage of the current study's design, according to Barney et al. (2010) who suggested self-labeling was more relevant to self-stigma than a PHQ-9-type definition. The single survey item utilized to identify self-labeling [Have you ever or do you currently suffer from depression?] was crafted to intentionally avoid the measurement of a diagnosis of depression, symptoms of depression, or past treatment of depression, all commonly measured in previous studies. Instead, the primary investigator avoided the act of defining depression to allow each participant to openly interpret the concept of depression and, consequently, determine whether they personally identify with the label.

The modified labeling theory suggests an individual who identifies with the label of depression will perceive a personal relevance to the stigmatizing views, will become labeled, will internalize feelings of discrimination and devaluation, and therefore will likely develop self-stigma (Link et al., 1989). The current study found a mean SSDS score of 59.1, which lies within the "moderate" reference range of 48.8 and 68.12. Furthermore, the current student sample scored higher self-stigma scores than university students in a recent study with average SSDS scores ranging between 51.8 and 58.4 (McGuire & Pace, 2018). In addition to the increased presence of depression labeling, the current study found a moderately increased level of self-stigma of depression at the university under study. The positive relationship between the two variables strengthened the theory's proposition of self-stigma development secondary to labeling. This finding illustrates a need for the eradication of labeling, an approach frequently

utilized to socially separate an individual who identifies with an attribute that falls outside the "norm" (Rusch et al., 2005). Therefore, interventions focused on normalizing depression and emphasizing the idea that affected individuals are still "one of us" and not "one of them" could reduce labeling and likely reduce self-stigma (Phelan & Basow, 2007).

Levels of Stigma

The primary investigator hypothesized the presence of increased levels of perceived public stigma, personal public stigma, and self-stigma of depression in college students. Likewise, the primary investigator hypothesized a positive relationship between levels of perceived public stigma and personal public stigma of depression in college students and a positive relationship between levels of personal public stigma and self-stigma of depression in college students.

The current study measured the three distinct forms of stigma as separate entities, previously identified as a need due to the absence of a clear demarcation between public stigmas and self-stigma (Barney et al., 2010; Griffiths et al., 2008; Lally et al., 2013). The primary investigator utilized validated, adapted tools, which directed the participant's focus toward the particular population (*most people* or *I*) under measure. This data collection technique provides a standardized format for use in future studies to avoid the obscuration of stigma conceptions.

Upon examining public stigma, the current study found a mean 12-item D-D scale score of 2.84, which lies within the "low" reference range of less than 3.65. Furthermore, the current student sample scored considerably lower perceived public stigma scores compared to students in a previous study with average perceived public stigma scores ranging between 3.85 and 4.1, depending on ethnicity (Loya et al., 2010). Alternatively, the current study found a median 3-item D-D scale score of 1.33, which lies within the "moderate" reference range of 1.17 and 2.85.

The current findings illustrate the student sample at the university under study scored a low perceived public stigma level, moderate personal public stigma level, and moderate self-stigma level when compared to students at other universities (Barney et al., 2010; Eisenberg et al., 2009; Kroska & Harkness, 2006; Loya et al., 2010; McGuire & Pace, 2018). The discordant presence of stigma levels challenged the modified labeling theory's hypothesis that three forms of stigma augment one another and develop sequentially once perceived public stigma is present (Corrigan, 2004; Corrigan, et al., 2006; Eisenberg et al., 2009; Vogel et al., 2007).

Perceived Public Stigma. Low perceived public stigma levels indicated individuals perceived a low existence of devaluation and discrimination towards students with depression within the university community. Since the theory suggests socialization within the community leads to the presence of perceived public stigma, one can conclude the university had an overall positive attitude towards students with depression (Eisenberg et al., 2009; Link et al., 1989; Link & Phelan, 2001).

Personal Public Stigma. Moderate personal public stigma levels indicated students personally acquired moderately increased feelings of devaluation and discrimination towards students with depression. Theorists previously presented the possibility of individuals being aware of societal perspectives but maintaining personal beliefs that are not in accordance with said perspectives (Link et al., 1989). This possibility is supported by the current presence of moderate personal public stigma levels in relation to low perceived public stigma levels, which challenges the significant influence of peer-held attitudes on individual attitudes emphasized by previous studies (Eisenberg et al., 2009; Lally et al., 2015; Vogel at al., 2007). Possible explanations for the discrepant results include: a) the current university sample does not hold an inflated, implausible view of public stigma, commonly found in other student samples (Defreitas

et al., 2018; Lally et al., 2010), b) individually-held stigma might be a more significant barrier to overall mental health than societal stigma (Loya et al., 2010; Schomerus, Matschinger, & Angermeyer, 2009), and c) sociocultural factors might influence individual beliefs more than peer-held beliefs, such as cultural and religious teachings and mental health literacy (Zolezzi et al., 2017).

Self-stigma. Moderate self-stigma levels indicated a moderately increased number of students with depression applied feelings of stigma to themselves. The moderate level of self-stigma (in students with depression) in relation to the moderate level of personal public stigma (in students without depression) supported the theory's proposition stating the presence of personal public stigma places the individual at increased risk of self-labeling (Link et al., 1989). The modified labeling theory also suggests self-stigmatizing students with depression obtain the potential to negatively react to labeling through secrecy and withdrawal, which lead to a multitude of negative consequences such as shame, low self-esteem, and social inadequacy (Link et al., 1989). The current study supplemented this proposal by utilizing stigma-measuring instruments that represented the full domain of each stigma while embodying the underlying constructs of the modified labeling theory. The data collection instruments measured feelings of devaluation and discrimination against people with depression, which represented the development of public stigma. Likewise, the data collection instruments measured feelings of shame, self-blame, social inadequacy, and help-seeking inhibition, which not only represented the development of self-stigma, but also the negative responses and consequences to said stigma. Additionally, a moderate self-stigma level at the university under study supports the conclusion that almost half of the study sample is at risk of experiencing new mental illness or worsening

symptoms of their current mental illness, according to the modified labeling theory's discussion regarding "states of vulnerability" (Link et al., 1989).

The Influence of Sample Characteristics

The primary investigator could not hypothesize about the influence of religiosity, race/ethnicity, previous contact, and year of study on both public stigma and self-stigma due to previous, variable findings regarding the existence and specificity of correlations. The current study did not find sufficient evidence to conclude that perceived public stigma and self-stigma were influenced by religiosity, race/ethnicity, previous contact, or year of study. Therefore, the current study could not provide clarity on the previous, inconsistent findings regarding the two forms of stigma. However, the previous lack of differentiation between different forms of stigma exists as a possible cause of previous, inconclusive results. For example, previous research examined the influence of sample characteristics on public stigma as a whole (Gaddis et al., 2018; Lally et al., 2013; Vogel et al., 2007). Therefore, the current study provided potential for the measurement of relationships between sample characteristics and each distinct form of stigma.

The primary investigator found sufficient evidence for a difference in personal public stigma levels across race/ethnicity and previous contact. In the current study, non-Caucasian students obtained higher personal public stigma than Caucasian students. This finding supported previous studies that discovered Caucasian students obtained lower overall public stigma levels than non-Caucasian groups, Chinese students obtained high personal public stigma levels, and Asian students obtained highest personal public stigma levels amongst all racial/ethnic groups (Corrigan et al., 2015, DeFreitas et al., 2018; Eisenberg et al., 2009; Loya et al., 2010; Wang et al., 2012). The current finding emphasizes how the concept of depression is deeply tied to culture

and ethnic background/teachings influence an individual's knowledge, attitude, and behavior regarding the concept (Loya et al., 2010; Zolezzi et al., 2017).

In the current study, students with previous contact with a person with mental illness obtained lower personal public stigma than students without previous contact. This finding is in contrast with several studies concluding personal contact was associated with higher levels of stigma due to an increased preference for social distancing (Defreitas et al., 2018; Lally et al., 2013). More importantly, the current finding added to the body of literature both demonstrating an association between a higher level of familiarity and a lower level of stigma and emphasizing the efficacy surrounding interventions that prioritize exposure (Eisenberg et al., 2009; Kroska & Harkness, 2006; Phelan & Basow, 2007).

Implications for Practice

Previous studies adequately demonstrated the poor consequences of mental illness stigma in college students. In college students who were victims of self-stigma, feelings of low self-esteem, low self-efficacy, powerlessness, discouragement, and unsupportiveness resulted in social distancing, decreased campus engagement, poor relationship development, and loss of educational and occupational opportunities (CDC et al., 2012; Corrigan et al., 2009; Kosyluk et al., 2016; Loya et al., 2010; Salzer, 2012). Likewise, past research provides strong evidence that students who obtained public stigma and self-stigma of mental illness were unlikely to disclose and seek treatment for a current or future psychological problem (Eisenberg et al., 2009; Gaddis et al., 2018; Lally et al., 2013; Loya et al., 2010; Zolezzi et al., 2017). Nonetheless, previous research lacks sufficient and consistent findings regarding stigma specific to depression and the negative effects in college students. Conflicting published results contribute not only to the

ambiguous nature of depression stigma, but also to inconsistent healthcare for individuals suffering from depression (Corrigan et al., 2000; Phelan & Basow, 2007).

The current study addressed the gap in literature by illuminating the increased devaluating and discriminating behavior towards students with depression in addition to the feelings of shame, self-blame, social inadequacy, and help-seeking inhibition in students with depression. Increasing awareness in healthcare providers with a focus on the probable consequences secondary to a state of vulnerability has the potential to improve inconsistent healthcare provided to students with depression. Increased provider understanding regarding stigmatization in college students could not only provide supplementary information to incorporate in clinical risk assessments, but also reduce provider stigma. The reduction of provider stigma could directly influence the help-seeking intention of college students with public and self-stigma, which could improve overall depression outcomes (Zolezzi et al., 2017).

The information presented in the current study illuminates opportunities to decrease stigma at the individual level instead of the community level, which is commonly addressed in previous stigma studies through the discussion of social-norms interventions (Eisenberg et al., 2009; Gaddis et al., 2018). While such changes at the community level would produce a positive benefit by reducing misperceptions and improving societal attitudes (Dempsey, McAlaney, & Bewick, 2018), the current study discusses more specific, less ambiguous interventions. Given the association between familiarity and personal public stigma discussed above, the promotion of interaction between students with and without depression within the university community could reduce an individual's preference for social distancing (Brown, 2012). Collaboration that promotes the informal exchange of mental illness experiences and emphasizes equal status would be the most efficacious (Corrigan & Penn, 1999). Examples include mental health fairs to

promote casual conversation regarding mental illness, campus wellness groups that encourage the discussion of common challenges encountered during the college experience, and the inclusion of national mental health non-profit chapters, such as Active Minds, on campus to empower students to openly speak and educate other students about mental health experiences.

Strengths, Limitations, and Future Directions

Along with the strengths mentioned above, the current study's design addressed the importance of context when measuring stigma, a gap in literature receiving minimal focus in previous studies (Gaddis et al., 2018). A true meso-level measurement of stigma should contextualize both individual perceptions of *other's* beliefs and individual *self-beliefs* (Gaddis et al., 2018). Therefore, the current study succeeded in providing an accurate contextualization of stigma by measuring public stigmas and self-stigma in an environment where sustained interactions occur in a specific location and at a specific time (Gaddis et al., 2018).

According to the Agency for Healthcare Research and Quality (AHRQ) (n.d.), a low participation rate of three percent to 20 percent is expected in research studies, allegedly a result of the general public's resistance to participate in research studies. The current study yielded an unexpectedly high participation rate of 61.4%, which strengthened the statistical power by providing an adequate sample size.

The current study obtained both expected and unexpected limitations that need to be addressed. The primary investigator was unable to make statistical inferences regarding the relationship between the three stigma levels due to the creation of two samples. For two reasons, the primary investigator measured perceived and personal public stigma levels in students who did not identify with depression and measured self-stigma levels in students who did identify with depression. The modified labeling theory suggests an individual develops self-stigma as a

result of the development of public stigma (Link et al., 1989). Therefore, the primary investigator did not measure public stigma levels in the individuals who identified with depression because it was assumed public stigma existed in the students who obtained self-stigma. Additionally, the primary investigator avoided the measurement of each form of stigma in both samples to shorten the survey length, reduce survey completion time, and reduce participant burden, which increased response and completion rates (Kost & Rosa, 2018).

The lack of previous literature studying stigma specific to depression created ambiguity when discussing current findings. To provide meaning to the current results, the primary investigator discussed current findings relative to previous literature referring to stigma of unspecified mental illness. However, the primary investigator recognized stating such conclusions obtained potential for faulty generalizations regarding stigma levels.

It is important to address several characteristics of the D-D scale that potentially introduced bias into the study. First, the D-D scale's 12 individual items directed the participant to reflect on *most peoples'* attitudes regarding people with depression. According to Eisenberg et al. (2009), the vague nature of the itemized phrasing may have caused students to think about the general society instead of their fellow university colleagues, potentially compromising the validity of the scale's results. Second, the primary investigator modified both the 12-item and three-item D-D scale by adjusting the wording to refer to stigma specific to depression. While the technique facilitated the current study objectives, the modification from its original form may have reduced the internal consistency of the survey.

Conclusion

The current findings suggested low levels of perceived public stigma, moderate levels of personal public stigma, and moderate levels of self-stigma of depression existed among college

students at the university under study. Likewise, current findings suggested personal public stigma was influenced by sample characteristics, including race/ethnicity and religiosity. Because high stigma levels place college students at risk for adverse reactions, negative consequences, and future disease, all impacting the social, educational, and occupational success of the student (Breslau, Lane, Sampson, & Kessler, 2008; Eisenberg et al., 2009; Fominaya et al., 2016; Lally et al., 2013; Loya, Reddy, & Hinshaw, 2010), an opportunity exists to normalize depression; increase awareness and understanding, especially in healthcare providers; and promote familiarity and exposure to reduce stigma at the individual-level.

The current study elucidated areas for future research, including the development of a definitive technique to interpret stigma scores, which would provide standardization when comparing stigma levels across universities. Likewise, a need exists for future studies to examine levels of perceived public stigma, personal public stigma, and self-stigma specific to depression, as separate entities utilizing scales representing underlying constructs, and in students who both identify and do not identify with the label of depression. A study with such a design could further support the propositions suggested by the modified labeling theory and potentially provide clarity regarding the variability of stigma across types of mental illness (Phelan & Basow, 2007).

References

Agency for Healthcare Research and Quality. (n.d.). Digital healthcare research archive. Retrieved from https://digital.ahrq.gov/ahrq-funded-projects/emerging-lessons/participant-recruitment-research

American Psychiatric Association. (2018). *Warning signs of mental illness.* Washington, DC: Parekh. Retrieved from https://www.psychiatry.org/patients-families/warning-signs-of-mental-illness

Association for University and College Counseling Center Directors, 2016. The association for university and college counseling center directors annual survey. Retrieved from https://www.aucccd.org/assets/documents/aucccd%202016%20monograph%20-%20public.pdf

Barney, L.J., Griffiths, K.M., Christensen, H., & Jorm, A.F. (2010). The self-stigma of depression scale (SSDS): Development and psychometric evaluation of a new instrument. *International Journal of Methods in Psychiatric Research, 19(4),* 243–254. doi: 10.1002/mpr.325

Belmont at a glance. (n.d.). Retrieved from https://www.belmont.edu/about/index.html

Breslau, J., Lane, M., Sampson, N., & Kessler, R.C. (2008). Mental disorders and subsequent educational attainment in a US national sample. *Journal of Psychiatric Research, 42,* 708-716. doi:10.1016/j.jpsychires.2008.1.016

Brown, C., Conner, K.O., Copeland, V.C., Grote, N., Beach, S., Battista, D., & Reynolds, III, C.F. (2011). Depression stigma, race, and treatment seeking behavior and attitudes. *Journal of Community Psychology, 38(3),* 350-368. doi: 10.1002/jcop.20368

Brown, S. (2012). The contribution of previous contact and personality traits to severe mental illness stigma. *American Journal of Psychiatric Rehabilitation, 15,* 274-289. doi: 10.1080/15487768.2012.703553

Centers for Disease Control and Prevention. (2016). *College Health and Safety.* Retrieved from https://www.cdc.gov/family/college/index.htm

Centers for Disease Control and Prevention, Substance Abuse and Mental Health Services Administration, National Association of County Behavioral Health & Developmental Disability Directors, National Institute of Mental Health, & The Carter Center Mental Health Program. (2012). *Attitudes toward mental illness: Results from the Behavioral Risk Factor Surveillance System*. Retrieved from https://www.cdc.gov/hrqol/Mental_Health_Reports/pdf/BRFSS_Full%20Report.pdf

Corrigan, P.W. (2004). How stigma interferes with mental health care. *The American Psychologist, 59(7),* 614-625. doi:10.1037/0003-066X.59.7.614

Corrigan, P.W., Kosyluk, K.A., Markowitz, F., Brown, R.L., Conlon, B., Rees, J.,…Al-Khouja, M. (2015). Mental illness stigma and disclosure in college students. *Journal of Mental Health, 25,* 222-240. doi:10.3109/09638237.2015.1101056

Corrigan, P.W., Larson, J.E., & Rusch, N. (2009). Self-stigma and the "why try" effect: Impact on life goals and evidence-based practices. *World Psychiatry, 8(2),* 75-81.

Corrigan, P.W., Morris, S.B., Michaels, P.J., Rafacz, J.D., Rusch, N. (2012). Challenging the public stigma of mental illness: A meta-analysis of outcome studies. *Psychiatric Services, 63(10),* 963-973.

Corrigan, P.W., & Penn, D.L. (1999). Lessons from social psychology on discrediting psychiatric stigma. *American Psychologist, 54,* 765-776. doi: 10.1037//0003-066x.54.9.765

Corrigan, P.W., River, L.P, Lundin, R.K., Wasowski, K.U., Campion, J., Mathisen, J.,…Gagnon, C. (2000). Stigmatizing attributions about mental illness. *Journal of Community Psychology, 28(1),* 91-102. doi:10.1002/(SICI)1520-6629(200001)28:1<91::AID-JCOP9>3.0.CO;2-M

Corrigan, P.W., & Watson, A.C. (2002). Understanding the impact of stigma on people with mental illness. *World Psychiatry, 1(1),* 16-20.

Corrigan, P.W., Watson, A.C., & Barr, L. (2006). The self-stigma of mental illness: Implications for self-esteem and self-efficacy. *Journal of Social and Clinical Psychology, 25(8),* 875-884. doi:10.1521/jscp.2006.25.8.875

DeFreitas, S.C., Crone, T., DeLeon, M., & Ajayi, A. (2018). Perceived and personal mental health stigma in latino and african american college students. *Journal of Original Research, 6(49),* 1-10. doi:10.3389/fpubh.2018.00049

Dempsey, R.C., McAlaney, J., & Bewick, B.M. (2018). A critical appraisal of the social norms approach as an interventional strategy for health-related behavior and attitude change. *Frontiers in Psychology, 9(2180),* 1-16. doi: 10.3389/fpsyg.2018.02180

Devine, P.G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology, 56(1),* 5-18. doi: 10.1037/0022-3514.56.1.5

Eisenberg, D., Downs, M., Golberstein, E., & Zivin, K. (2009). Stigma and help seeking for

mental health among college students. *Journal of Medical Care Research and Review, 66(5),* 522-541. doi:10.1177/1077558709335173

Eisenberg, D., Golberstein, E., & Gollust, S.E. (2007). Help-seeking and access to mental health care in a university student population. *Medical Care, 45,* 594-601. doi:10.1097/MLR.0b013e31803bb4c1

Eisenberg, D., Speer, N., & Hunt, J.B. (2012). Attitudes and beliefs about treatment among college students with untreated mental health problems. *Psychiatric Services, 63(7),* 711-713. Retrieved from ps.psychiatryonline.org

Fominaya, A.W., Corrigan, P.W., & Rusch, N. (2016). The effects of pity on self- and other-perceptions of mental illness. *Psychiatry Research, 241,* 159-164. doi:10.1016.j.psychres.2016.04.058

Ford, T.E., & Stangor, C. (1992). The role of diagnosticity in stereotype formation: Perceiving group means and variances. *Journal of Personality and Social Psychology, 63,* 356-367. doi:10.1037/0022-3514.63.3.356

Gaddis, S., Ramirez, D., & Hernandez, E. (2018). Contextualizing public stigma: Endorsed mental health treatment stigma on college and university campuses. *Journal of Social Science & Medicine, 197,* 183-191. doi:10.1016/j.socscimed.2017.11.029

Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity.* Englewood Cliffs, NJ: Prentice Hall.

Griffiths, K.M., Christensen, H., & Jorm, A.F. (2008). Predictors of depression stigma. *BMC Psychiatry, 8(25),* 1-12. doi:10.1186/1471-244X-8-25

Hilton, J.L., & Hippel, W.V. (1996). Stereotypes. *Annual Review of Psychology*, 47, 237-271. doi: 10.1146/annurev.psych.47.1.237

Kost, R.G. & Rosa, J.C. (2018). Impact of survey length and compensation on validity, reliability, and sample characteristics for ultrashort-, short-, and long-research participant perception surveys. *Journal of Clinical and Translational Science, 2(1),* 31-37. doi: 10.1017/cts.2018.18

Kosyluk, K., Al-Khouja, M., Bink, A., Buchholz, B., Ellefson, S., Fokuo, K.,…Schmidt, A., & Corrigan, P. (2016). Challenging the stigma of mental illness. *Journal of Adolescent Health, 59,* 325-331. doi:10.1016/j.jadohealth.2016.05.005

Kroska, A. & Harkness, S.K. (2006). Stigma sentiments and self-meanings: Exploring the modified labeling theory of mental illness. *Social Psychology Quarterly, 69(4),* 325-348. doi: 10.1177/019027250606900403

Lally, J., O'Conghaile A., Quigley, S., Bainbridge, E., & McDonald, C. (2013). Stigma of mental illness and help-seeking intention in university students. *The Psychiatrist, 37(8),* 253-260. doi:10.1192/pb.bp.112.041483

Link, B.G., Cullen, F.T., Struening, E., Shrout, P.E., & Dohrenwend, B.P. (1989). A modified labeling theory approach to mental disorders: An empirical assessment. *American Sociological Review, 54(3),* 400-423. doi:10.2307/2095613

Link, B.G., & Phelan, J.C. (2001). Conceptualizing stigma. *Annual Review of Sociology, 27,* 363-385. doi:10.1146/annurev.soc.27.1.363

Loya, F., Reddy, R., & Hinshaw, S.P. (2010). Mental illness stigma as a mediator of differences in caucasian and south asian college students' attitudes toward psychological counseling. *Journal of Counseling Psychology, 57(4),* 484-490. doi:10.1037%2Fa0021113

McGuire, J.M., & Pace, A.C. (2018). Self-stigma of depression in Christians versus the general population. *Mental Health Religion & Culture, 21(6),* 601-608. doi: 10.1080/13674676.2018.1522623

Mead, G.H. (1934). Mind, self, and society. Chicago: University of Chicago Press.

Musada, A., Anderson, P.L., & Edmonds, J. (2012). Help-seeking attitudes, mental health stigma, and self-concealment among african american college students. *Journal of Black Studies, 43(7),* 773-786. doi:10.1177/0021934712445806

National Alliance on Mental Illness. (2012). *College students speak: A survey report on mental health.* Arlington, VA: Gruttadaro & Crudo.

National Institute of Mental Health. (2017). *Mental illness: Prevalence of any mental illness (AMI).* Retrieved from https://www.nimh.nih.gov/health/statistics/mental-illness.shtml

Nelson, L.J., & Miller, D.T. (1995). The distinctiveness effect in social categorization: You are what makes you unusual. *Psychological Science, 6,* 246-249. doi:10.1111/j.1467-9280.1995.tb00600.x

Phelan, J.E., & Basow, S.A. (2007). College students' attitudes toward mental illness: An

examination of the stigma process. *Journal of Applied Social Psychology, 37(12),* 2877-2902. doi:10.1111/j.1559-1816.2007.00286.x

Ritchie, H., & Roser, M. (2018). Mental health. Retrieved from https://ourworldindata.org/mental-health#anxiety-disorders

Roeloffs, C., Sherbourne, C., Unutzer, J., Fink, A., Tang, L., & Well, K.B. (2003). Stigma and depression among primary care patients. *General Hospital Psychiatry, 25(3),* 311-315. doi: 10.1016/S0163-8343(03)00066-5

Rusch, N., Angermeyer, M.C., & Corrigan, P.W. (2005). Mental illness stigma: Concepts, consequences, and initiatives to reduce stigma. *European Psychiatry, 20,* 529-539. doi: 10.1016/j.eurpsy.2005.04.004

Ryan, C. (2007). *Attribution theory and perceptions of mental illness in a university population*. Retrieved from Electronic Theses and Dissertations. (AAT 7001)

Salzer, M. (2012). A comparative study of campus experiences of college students with mental illnesses versus a general college sample. *Journal of American College Health, 60(1),* 1-7. doi:10.1080/07448481.2011.552537

Scheff, T. (1984). Being mentally ill: A sociological theory (2nd ed.). Chicago: Aldine

Schneider, J., & Conrad, P. (1980). In the closet with illness: Epilepsy, stigma potential, and information control. *Social Problem, 28(1),* 32-44. doi:10.2307/800379

Schomerus, G., Matschinger, H., & Angermeyer, M.C. (2009). The stigma of psychiatric treatment and help-seeking intentions for depression. *European Archives of Psychiatry and Clinical Neuroscience, 259,* 298-306. doi: 10.1007/s00406-009-0870-y

Setia, M.S. (2016). Methodology series module 3: cross-sectional studies. *Indian Journal of Dermatology, 61(3),* 261-264. doi:10.4103/0019-5154.182410

Sirey, J.A., Bruce, M.L., Alexopoulos, G.S., Perlick, D.A., Friedman, S.J., & Meyers, B.S. (2001). Perceived stigma and patient-rated severity of illness as predictors of antidepressant drug adherence. *Psychiatric Services, 52,* 1615-1620. doi:10.1176/appi.ps.52.12.1615

Stafford, M.C., & Scott, R.R. (1986). Stigma deviance and social control: Some conceptual issues. In S.C. Ainlay, G. Becker, & L.M. Coleman (Eds.), *The Dilemma of Difference* (pp. 77-91). New York, New York: Plenum.

U.S. Department of Health and Human Services. (1999). *Mental health: A report of the surgeon general.* Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, & National Institute of Mental Health.

Vogel, D.L., Wade, N.G., & Hackler, A.H. (2007). Perceived public stigma and the willingness to seek counseling: The mediating roles of self-stigma and attitudes toward counseling. *Journal of Counseling Psychology, 54(1),* 40-50. doi: 10.1037/0022-0167.54.1.40

Wang, X., Huang, X., Jackson, T., & Chen, R. (2012). Components of implicit stigma against mental illness among chinese students. *PLOS One Journal, 7(9),* 1-6. doi:10.1371/journal.pone.0046016

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review, 92,* 548-573. doi: 10.1037/0033-295X.92.4.548

Weiner, B., Perry, R.P., & Magnusson, J. (1988). An attributional analysis of reactions to stigma. *Journal of Personality and Social Psychology, 55,* 738-748. doi: 1989-08533-001

Zolezzi, M., Bensmail, N., Zahrah, F., Khaled, S., & El-Gaili, T. (2017). Stigma associated with mental illness: Perspectives of university students in Qatar. *Journal of Neuropsychiatric Disease and Treatment, 13,* 1221-1233. doi:10.2147/NDT.S132075

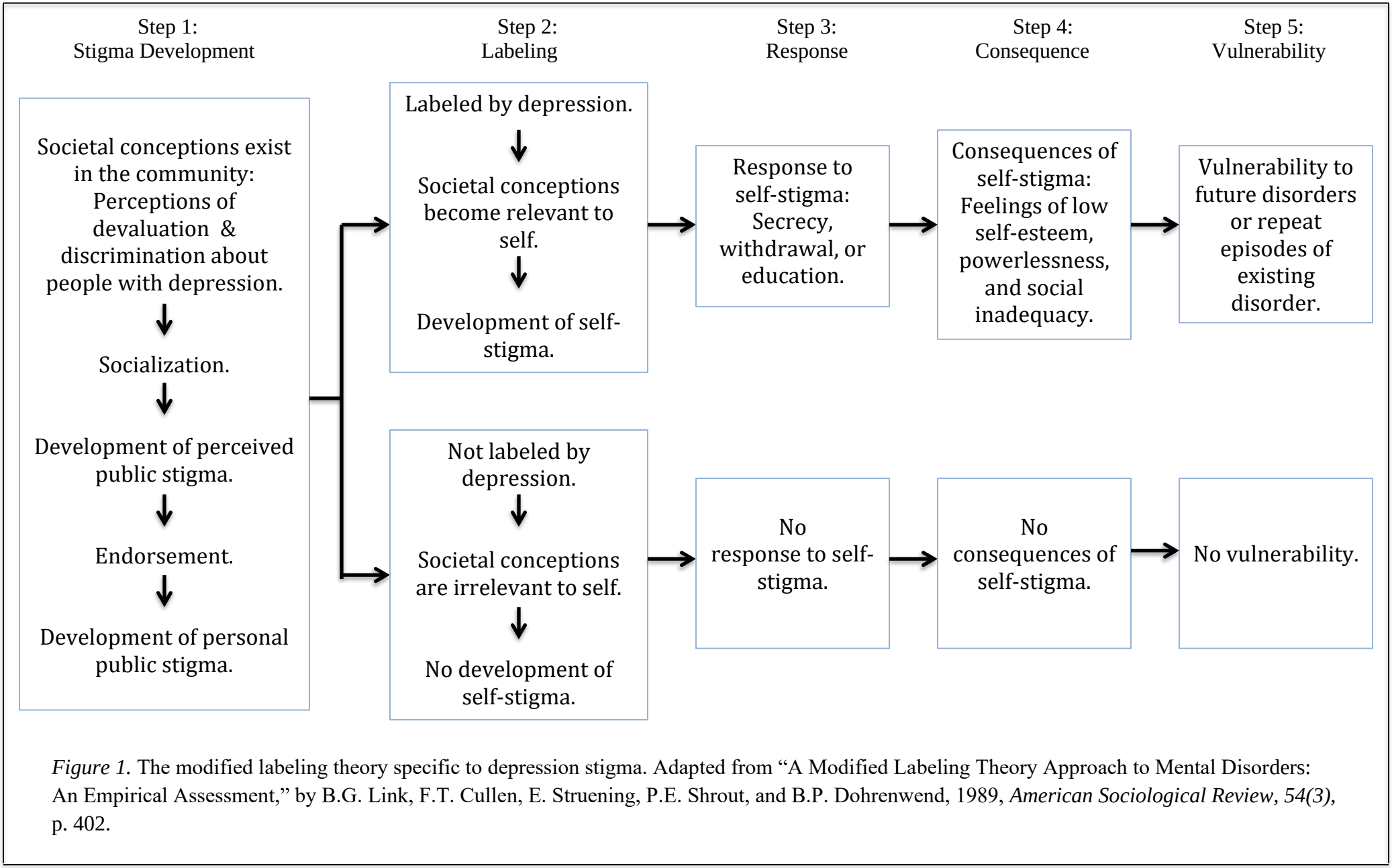

Figure 1. The modified labeling theory specific to depression stigma. Adapted from "A Modified Labeling Theory Approach to Mental Disorders: An Empirical Assessment," by B.G. Link, F.T. Cullen, E. Struening, P.E. Shrout, and B.P. Dohrenwend, 1989, *American Sociological Review, 54(3),* p. 402.

Table 1

Sample Characteristics (N=401)

Characteristics	*n*	%	Characteristics	*n*	%
Depression label:			Previous contact:		
Yes	200	49.9	Yes	390	97.3
No	201	50.1	No	11	2.7
Low religiosity (total)	142	35.4	Gender:		
Not at all religious	43	10.7	Male	72	18
Not too religious	99	24.7	Female	328	81.8
High religiosity (total)	259	64.6	Other	1	0.2
Fairly religious	155	38.7	Undergraduate student (total)	257	64.1
Very religious	104	25.9	1st year undergraduate	73	18.2
Non-Caucasian (total)	61	15.2	2nd year undergraduate	54	13.5
Asian	16	4	3rd year undergraduate	58	14.5
Black/African	12	3	4th year undergraduate	52	13
Hispanic/Latino	14	3.5	5th year or higher undergraduate	20	5
Native American	2	0.5	Graduate student (total)	144	35.9
Pacific Islander	1	0.2	1st year graduate	51	12.7
Mixed Race	8	2	2nd year graduate	39	9.7
Other	8	2	3rd year graduate	48	12
Caucasian	340	84.8	4th year graduate	2	0.5
			5th year or higher graduate	4	1

Table 2

Levels of Self-stigma and Perceived Public Stigma across Religiosity and Race/Ethnicity

Stigma	Religiosity								Race/Ethnicity							
	Low		High						Non-Caucasian		Caucasian					
	n	*M(SD)*	*n*	*M(SD)*	*t(df)*	*p*	*d*	95% CI	*n*	*M(SD)*	*n*	*M(SD)*	*t(df)*	*p*	*d*	95% CI
Self-stigma	77	59.1 (10.8)	123	59.1 (8.22)	0.019 (131)	.99	0.003	[-2.81, 2.86]	26	59.7 (10.2)	174	59 (9.13)	-0.35 (198)	.73	0.07	[-4.53, 3.16]
Perceived public stigma	65	2.81 (0.71)	136	2.86 (0.73)	-0.44 (199)	.66	0.066	[-0.26, 0.17]	35	2.96 (0.56)	166	2.82 (0.75)	-1.07 (199)	.29	0.22	[-0.41, 0.12]

Table 3

Levels of Self-stigma and Perceived Public Stigma across Previous Contact and Year of Study

Stigma	Previous Contact								Year of Study							
	Yes		No						Undergraduate		Graduate					
	n	*M(SD)*	*n*	*M(SD)*	*t(df)*	*p*	*d*	95% CI	*n*	*M(SD)*	*n*	*M(SD)*	*t(df)*	*p*	*d*	95% CI
Self-stigma	-	-	-	-	-	-	-	-	138	58.8 (9.22)	62	59.8 (9.35)	-0.71 (198)	.48	0.11	[-3.79, 1.79]
Perceived public stigma	192	2.83 (0.73)	9	3.18 (0.48)	-1.43 (199)	.15	0.57	[-0.83, 0.13]	119	2.78 (0.72)	82	2.93 (0.71)	-1.39 (199)	.17	0.2	[-0.35, 0.061]

Table 4

Levels of Personal Public Stigma across Religiosity and Race/Ethnicity

Stigma	Religiosity									Race/Ethnicity								
	Low			High						Non-Caucasian			Caucasian					
	n	*Mdn*	*IQR*	*n*	*Mdn*	*IQR*	*U*	*Z(r)*	*p*	*n*	*Mdn*	*IQR*	*n*	*Mdn*	*IQR*	*U*	*Z(r)*	*p*
Personal public stigma	65	1.33	1	136	1.33	1	4105	-0.85 (-.042)	.4	35	1.67	1.67	166	1.33	0.75	2173.5	-2.44 (-.12)	.015

Table 5

Levels of Personal Public Stigma across Previous Contact and Year of Study

Stigma	Previous Contact									Year of Study								
	Yes			No						Undergraduate			Graduate					
	n	*Mdn*	*IQR*	*n*	*Mdn*	*IQR*	*U*	*Z(r)*	*p*	*n*	*Mdn*	*IQR*	*n*	*Mdn*	*IQR*	*U*	*Z(r)*	*p*
Personal public stigma	192	1.33	1	9	2	0.83	556.5	-1.88 (-.094)	.06	119	1.33	0.67	82	1.33	1	4313	-1.46 (-.073)	.15

APPENDIX A. PERCEIVED PUBLIC STIGMA OF DEPRESSION.

Participant instructions: Please indicate whether you agree or disagree with the following statements.

1. Most people would willingly accept someone who has received depression treatment as a close friend.
2. Most people believe that a person who has received depression treatment is just as intelligent as the average person.
3. Most people believe that someone who has received depression treatment is just as trustworthy as the average person.
4. Most people would accept someone who has fully recovered from depression as a teacher of young children in a public school.
5. Most people feel that receiving depression treatment is a sign of personal failure.*
6. Most people would not hire someone who has received depression treatment to take care of their children, even if he or she had been well for some time.*
7. Most people think less of a person who has received depression treatment.*
8. Most employers will hire someone who has received depression treatment if he or she is qualified for the job.
9. Most employers will pass over the application of someone who has received depression treatment in favor of another applicant.*
10. Most people in my community would treat someone who has received depression treatment just as they would treat anyone.
11. Most young adults would be reluctant to date someone who has been hospitalized for depression.*
12. Once they know a person has received depression treatment, most people will take that person's opinions less seriously.*

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*Note: Answer choices for each item are: 1 = strongly agree, 2 = agree, 3 = somewhat agree, 4 = somewhat disagree, 5 = disagree, 6 = strongly disagree. * Indicates reverse-scored item. Answer choices for each reverse-scored item are: 6 = strongly agree, 5 = agree, 4 = somewhat agree, 3 = somewhat disagree, 2 = disagree, 1 = strongly disagree.*

APPENDIX B. PERSONAL PUBLIC STIGMA OF DEPRESSION.

Participant instructions: Please indicate whether you agree or disagree with the following statements.

1. I would willingly accept someone who has received depression treatment as a close friend.
2. I would think less of a person who has received depression treatment.*
3. I believe that someone who has received depression treatment is just as trustworthy as the average person.

---

*Note: Answer choices for each item are: 1 = strongly agree, 2 = agree, 3 = somewhat agree, 4 = somewhat disagree, 5 = disagree, 6 = strongly disagree. * Indicates reverse-scored item. Answer choices for each reverse-scored item are: 6 = strongly agree, 5 = agree, 4 = somewhat agree, 3 = somewhat disagree, 2 = disagree, 1 = strongly disagree."*

APPENDIX C. SELF-STIGMA OF DEPRESSION.

Participant instructions: Please read the following two vignettes.

Vignette 1

John is 30 years old. He has been feeling unusually sad and miserable for the last few weeks, and doesn't enjoy the things he used to like doing. Even though John is tired all the time, he has trouble sleeping nearly every night. John doesn't feel like eating and has lost weight. He can't concentrate on things and puts off making decisions. John feels that everything is a great effort, and even day-to-day tasks seem too much for him. He feels worthless a lot of the time. John went to see his doctor who says there are no physical causes for his problems and that John is suffering from depression.

Vignette 2

John is 30 years old. He has been feeling sad and miserable for a long time, and doesn't enjoy the things he used to like doing. Even though John is tired all the time, he has trouble sleeping nearly every night. John doesn't feel like eating and has lost weight. He can't concentrate on things and puts off making decisions. John feels that everything is a great effort, and even day-to-day tasks seem too much for him. He feels worthless a lot of the time. John went to see his doctor who says there are no physical causes for his problems and confirms John's belief that he is suffering from depression. John has been so desperate that he has been thinking of ways to end his life, and he is worried that he will need to be hospitalised again.

*Participant instructions: Now take a minute to imagine <u>you</u> were depressed. Think about how **you might feel about yourself,** then indicate how strongly you agree or disagree with each statement.*

1. I would feel embarrassed.
2. I would feel ashamed.
3. I would feel disappointed in myself.
4. I would feel inferior to other people.
5. I would think I should be able to 'pull myself together.'
6. I would think I should be able to cope with things.
7. I would think I should be stronger.
8. I would think I only had myself to blame.
9. I would feel like I was good company.*
10. I would feel like a burden to other people.
11. I would feel inadequate around other people.
12. I would feel I couldn't contribute much socially.
13. I wouldn't want people to know that I wasn't coping.
14. I would see myself as weak if I took antidepressants.
15. I would feel embarrassed about seeking professional help for depression.
16. I would feel embarrassed if others knew I was seeking professional help for depression.

*Note: Answer choices for each item are: 5 = Strongly agree, 4 = Agree, 3 = Neither agree nor disagree, 2 = Disagree, 1 = Strongly disagree. * Indicates reverse-scored item. Answer choices for each reverse-scored item are: 1 = Strongly agree, 2 = Agree, 3 = Neither agree nor disagree, 4 = Disagree, 5 = Strongly disagree.*