UNDERGRADUATE PSYCHOLOGY STUDENTS' PERCEPTIONS OF SCHIZOPHRENIA

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ABSTRACT

The author investigated the knowledge and attitudes of undergraduate psychology students toward mental illness, specifically schizophrenia. Student participants responded to several scales measuring various attitudes toward schizophrenia. The author found that students scored approximately 63% on the Understanding Schizophrenia Quiz, which was greater than what was hypothesized. There were significant differences in all four of the CAMI dimensions and both of the OMI dimensions when compared to neutral, meaning that overall students did not have stigmatizing views. Finally, there were no correlations found between scores on the Understanding Schizophrenia Quiz and any of the dimensions on either the CAMI or the OMI, therefore more knowledge did not produce more positive attitudes toward schizophrenia. These results indicate that the amount of basic knowledge about schizophrenia may not be the primary determinant of attitudes towards individuals with schizophrenia.

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CHAPTER I

REVIEW OF LITERATURE

The aim of this literature review is to explore perceptions of people with schizophrenia. This review will cover definitions of stigma, common stigma about mental illness, literature on stigma associated with schizophrenia, and the general views and attitudes towards people with schizophrenia.

Stigma

In the Oxford English Dictionary (n.d.), the word stigma, in the definition relevant to this literature review, is stated as "A mark of disgrace associated with a particular circumstance, quality, or person: 'the stigma of a mental disorder' or 'to be a nonreader carries a social stigma.'"

Stigma is commonly associated with a variety of chronic health conditions such as HIV/AIDS, leprosy, and mental illness (Brakel, 2006). There have been three other sets of authors that have proposed notable definitions; such as Goffman (1963), Jones et al. (1984), and Link and Phelan (2001). Goffman's classical definitions of stigma are an "attribute that is deeply discrediting," "the situation of the individual who is disqualified from full social acceptance," and also the person being stigmatized is reduced "from a whole and usual person to a tainted, discounted one" (Goffman, 1963, p. 3).

Jones et al. (1984) continued with Goffman's perception and wrote *Social Stigma: The Psychology of Marked Relationships*, and in this book they use the term "mark." The term "mark" is used to describe all the different conditions that society deems as atypical and that might cause stigmatization. Jones et al. (1984) established six dimensions of stigma. The dimension of *concealability* helps specify the extent to which the characteristic is identifiable or detectable to others. *Course* describes the condition over time, such as whether it is reversible or irreversible. *Disruptiveness* refers to the extent that the condition impedes or makes interactions with others difficult. The *aesthetic* dimension refers to the spectrum of reactions toward one's stigma, such as whether the mark is attractive or disgusting. *Origin* is how the condition arose or began. Finally, *peril* is the dimension that encompasses the capability of the condition causing the feeling of threat or danger in others.

Link and Phelan (2001) defined stigma in terms of four separate but interconnected components. Link and Phelan (2013) state that their definition of stigma from 2001 puts forward the idea of stigma as connecting different concepts such as stereotyping, labeling, stigmatizing, and discrimination. They define stigma as a relationship among those four concepts.

Link and Phelan (2013) believe that they produced an explanation about how stigma develops. First, people distinguish and put labels on differences between humans. Second, people that belong to the dominant cultural group associate labeled people with certain undesirable attributes. Third, groups or individuals that are negatively labeled are separated in a distinct category from the people who are not stigmatized. Fourth, due to these first three components, individuals who are labeled experience a loss of status. Finally, the action of placing stigma onto an individual depends on how much social, economic, and political power the stigmatizer is able to attain. Link and Phelan (2013) developed a succinct version of stigma as “labeling, stereotyping, separation, status loss, and discrimination” all occurring simultaneously.

Link, Yang, Phelan, and Collins (2004) state that it is important to remember that stigma is a “matter of degree” and each component that constitutes stigma will vary. For example, designated labels, losing social status, or being discriminated against could have either a substantial effect or only play a minor role in the stigmatized person’s life. They state that stigma will vary across conditions such as schizophrenia, obesity, short stature, and HIV. In some conditions, it is thought that the stigma connected to schizophrenia, obesity, etc. may be worse than the actual disorder.

Gerlinger et al. (2013) state that it is important to distinguish different types of stigma. First, for example, there is public stigma when “the general population endorses prejudice and manifests discrimination toward people with mental illness” (Corrigan, Watson, & Barr, 2006, p. 877). Second, there is personal stigma “consisting of perceived stigma … The perception or anticipation of stigma refers to people’s beliefs about attitudes of the general population” (Gerlinger et al., 2013, p. 155). This is regarding their own condition and about themselves within the group that is potentially stigmatized. Experienced stigma is when people with a potentially stigmatizing condition actually are exposed to discrimination or are being limited due to their condition. Finally, self-stigma or internalized stigma is when the stigmatized people actually come to believe and adopt the stigmatizing views against themselves. Boyd, Adler, Otilingam, and Peters (2014) state that “internalized stigma, also referred to as self-stigma, is characterized by a subjective perception of devaluation, marginalization, secrecy, shame, and withdrawal”

(p. 221). Corrigan and Watson (2002) define self-stigma as a transformation of identity that could lead to the loss or change of previous thoughts about the self, which result in adverse consequences such as decreasing self-esteem and self-efficacy.

Brakel (2006) states that stigma has other components as well. The stigmatizing attitudes that are seen throughout communities typically are seen as the major or even the only source of stigma. There are many other important sources of stigma that should be noted such as the media. Brakel also states that stigma affects the person with the stigmatizing condition, but it can have detrimental effects to the person's family as well. Stigma can affect many aspects of a person's life such as social participation, quality of life, psychological health, physiological health, health-seeking behavior, and treatment adherence.

Link and Phelan (2013) discuss the three reasons why people stigmatize others, as was developed by Phelan, Link, and Dovidio (2008): 1) exploitation/domination, 2) enforcement of social norms, and 3) avoidance of disease. With domination and exploiting others, power and status can be gained. People who dominate and exploit can maintain what advantage they believe they have. Inequalities then develop between groups of people, and ideologies are formed and then the inequalities are perpetuated. Second is enforcement of social norms, which are the written and unwritten rules that people follow and are used to modify others' behavior. In this use of stigma, Link and Phelan state that people are "kept in" by influencing the behavior of those that violate the social norm. The payoff is keeping the status quo and not changing how people should or should not behave. Finally, Link and Phelan cite Kurzban and Leary's (2001) belief that avoidance of disease comes from the evolution of learning to avoid those that may be infected by parasites and that these parasites can lead to “deviations from the organism’s normal (healthy) phenotype” (Kurzban & Leary, 2001, p. 197). It is thought that this has manifested to stigmatize and “avoid” all others, or “keep people away,” who are “diseased” in order to stay healthy.

Mental Health Stigma

Corrigan and Penn (1999) define public stigma as having negative attitudes that provoke individuals to avoid, fear, and potentially discriminate against those with mental illnesses. Stigma directed towards those with mental illness is associated with a lack of engagement or continuance in mental health services and inferior treatment outcomes. In 1999 the Surgeon General of the United States identified stigma as being a significant obstruction to mental health treatment (U.S. Department of Health and Human Services, 1999). Stigma towards those with mental illness contributes to poor social networks, social exclusion, increased suicide, lower income, unemployment, and a reduced motivation to seek help (Pingani et al., 2015). Corrigan and Shapiro (2010) stated that individuals with mental illness are more likely to experience discrimination, reduced autonomy, reduced self-efficacy, and segregation. They are more likely to be discriminated against when applying for housing and employment. People with mental illness are also more likely to experience homelessness than those without mental illness (Corrigan & Shapiro, 2010).

Stigmatizing beliefs about the competency of people suffering from mental illness negatively affects the individual’s financial autonomy, restricts opportunities, leads to a decrease in independence, and can also lead to coercive treatment (Corrigan & Shapiro, 2010). When an individual experiences a decrease in self-esteem and self-efficacy, which Corrigan and Shapiro (2010) found in those experiencing stigmatization due to their mental illness, it is common to also frequently see many different negative feelings, such as shame and hopelessness (Graves, Cassisi, & Penn, 2005). These negative outcomes impede the process of recovery for these same individuals (Pingani et al., 2015).

A common stigmatization and misconception among the general public is that those with mental illnesses are dangerous to themselves and others. The perception of these individuals as being dangerous has increased over time. Phelan, Link, Stueve, and Pescosolido (2000) found that among adults who related mental illness with psychosis, the likelihood of characterizing and thinking that individuals with mental illnesses are violent in 1996 were 2.3 times greater than in 1950. Adults are also much more likely to perceive an individual with mental illness as being dangerous when compared to an individual in a wheelchair (Corrigan, Kuwabara, & O'Shaughnessy, 2009). Perceptions of dangerousness vary with specific mental disorders. In comparison to other diagnoses, "people diagnosed with schizophrenia are seen as more dangerous and less likely to recover than other diagnoses" (Wood, Birtel, Alsawy, Pyle, & Morrison, 2014, p. 607).

There is a common set of stereotypes that have been developed about those with mental illness and there are four dimensions developed by Cohen and Struening (1962) that encompass the general attitudes toward mental illness. First, *authoritarianism*, which Corrigan, Green, Lundin, Kubiak, and Penn (2001) also discuss, is the belief that having an authority to control those with mental illnesses is critical since they are incapable of responsibility and taking care of themselves. Second, *social restrictiveness* is when the activities of those with mental illnesses should be restricted, or that they are dangerous and should be feared and excluded from the general population. *Interpersonal etiology* is the third dimension, which is the belief that interpersonal experiences, and more specifically an absence of a loving home environment, help cause mental illness. Finally, *benevolence* is the belief that people with mental illnesses are naive and innocent and they are supported by the good of humanity and religion. It may appear that *benevolence* is not as harmful as the others, but Corrigan et al. (2001) found that holding the opinion of *benevolence* toward those with mental illnesses actually results in feelings of anger and annoyance.

Link and Phelan (2013) state that of the three reasons for stigmatization developed by Phelan et al. (2008) (exploitation/domination, enforcement of social norms, and avoidance of disease), the primary reason for the stigmatization of individuals with mental illness is the attempt to “keep people in” or to maintain and enforce social norms. They state that the initial reaction to symptoms can often alter the rule-breaking behavior. Expressing disapproval towards the ideas expressed by individuals with psychosis, criticizing people with depression to simply “snap out of it” or to “be happy,” or telling someone with anorexia to eat a hamburger all are initial reactions that can alter the individual’s “abnormal” behavior. Link and Phelan (2013) also state that the uncommon behavior of psychosis or someone being extremely underweight due to anorexia could elicit a want for “disease avoidance.”

Link and Phelan (2013) state that their definition incorporates “power” and that to have successful stigmatization one needs power. In order to construct stereotypes that are widely known and applied, one must have a certain amount of control to exert their influence. They state that it “takes power” to stigmatize. Link and Phelan cite Bourdieu (1987) to explain their concept of “stigma power.” They use Bourdieu’s three aspects of what he called “symbolic power.” The first is about value, worth, and the culture differences between the two, which is an important mechanism for the exercise of power. Through stigma, the stigmatizer is making a statement about a person’s worth and value. Second, internalized stigma or self-stigma demonstrates power because there is so much power behind the stigma that people being stigmatized come to believe that they are less worthy than others and that the stigma is valid. Finally, Bourdieu (1990) states that symbolic power is “misrecognized” both by the individuals inflicting the harm and by the stigmatized, the people being harmed.

Numerous studies such as Boyd et al. (2014), Couture and Penn (2003), Gerlinger et al. (2013), Link and Phelan (2013), Link et al. (2004), Parcesepe and Cabassa (2013), and Pingani et al. (2015) all discuss how stigma affects the lives of people with mental illness. Link and Phelan (2013) state that people with serious mental illnesses are disadvantaged when it comes to opportunities in education, housing, income, and obtaining medical services. Some of this disadvantage may be due to the direct consequences of the disorder but many of these are also due to what Link and Phelan call “stigma power.” They believe that there are two main consequences encountered by those with mental illnesses due to stigma; status loss and discrimination.

Link and Phelan (2013) state that status loss is almost an immediate consequence of successful stigmatization. The person is associated with undesirable characteristics and is consequently put in a lower category of status by others. It has been seen that the ability to achieve one's aspirations can be immediately ruined due to a loss of status. Seeman, Tang, Brown, and Ing (2016) found that a relatively large number of individuals in developing countries are in daily contact with a person with a mental illness and this result suggests that people with mental disorders are kept at home. Seeman et al. (2016) state that this result could be due to the family's embarrassment and concern about "losing face," as well as difficulty obtaining mental health services. Restricting those with mental illness to stay at or near the home is a perfect example of a loss of power and status. If it is thought that the person with a mental illness brings shame to the family, then that individual sits at a very low end of the status spectrum without any power. This is due to the fact that decisions that are made by the individual could bring more shame and a lower status for everyone in the family and not only the individual. For example, if the individual acts counter to what is considered socially appropriate, the family could be seen as being responsible for the individual's actions.

Link and Phelan (2013) identified four processes of discrimination that belong to the stigma process, the first being individual discrimination. Individual discrimination is when an individual is discriminated against, whether purposefully or not, due to mental illness. For example, a hospitalized person with depression may be given self-help books while others with medical illnesses may be given flowers and chocolate. Individual discrimination can come from many different sources: Friends, family, medical personnel, or community members. Second, discrimination that operates through stigmatized individuals occurs when people are diagnosed with a mental illness and they have a belief that others will stigmatize them. This is different from self-stigma because the people being stigmatized may not accept the stigma but they do believe that others accept it and will stigmatize them. Interactional discrimination is the third type, which is the belief that there are substantial differences in social interaction when one of the people in the interaction has a mental illness. Social influence and social distance can be significant factors even when people without mental illnesses do not know why they are behaving differently. Finally, Link and Phelan (2013) state that structural discrimination is when institutional structures, such as social policy, disadvantage groups that are stigmatized more and more over time. Link and Phelan cite Schulze and Angermeyer (2003) on the large number of health insurance companies that develop policies that provide less coverage for those who are mentally ill.

Schizophrenia

Bateson, Jackson, Haley, and Weakland (1956) state that schizophrenia, in its' "nature, etiology, and the kind of therapy to use for it—remains one of the most puzzling of mental illnesses" (p. 251). This remains true today. Millier et al. (2014) describes schizophrenia as a disorder of brain function that affects one's thoughts, feelings, and behaviors. Both Alshowkan, Curtis, and White (2012) and Schultz, North, and Shields (2007) state that schizophrenia is a devastating disorder that damages mental and social functioning and can lead to developing comorbidities. "Deficits in social functioning, including communicating with others, maintaining employment, and functioning in the community, are observed in many disorders but are a defining feature of schizophrenia" (Couture, Penn, & Roberts, 2006, p. S44).

According to the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed., *DSM-5*; American Psychiatric Association, 2013), schizophrenia spectrum disorders and other psychotic disorders are "defined by abnormalities in one or more of the following domains: delusions, hallucinations, disorganized thinking (speech), grossly disorganized or abnormal motor behavior (including catatonia), and negative symptoms" (p. 87). Schultz et al. (2007) state that schizophrenia is characterized by positive and negative symptoms. Positive symptoms are defined as symptoms that most people do not normally experience, they are added to what is considered normal thought processes. "Positive symptoms include hallucinations, voices that converse with or about the patient, and delusions that are often paranoid" (Schultz et al., 2007, p. 1822). Negative symptoms are deficits of thought processes or emotional responses, so they are subtracted from an individual's functioning. "Negative symptoms include flattened affect, loss of a sense of pleasure, loss of will or drive, and social withdrawal" (p. 1822). Symptoms reflect a separation from reality (Alshowkan et al., 2012; Millier et al., 2014). Schultz et al. (2007) state that "schizophrenia is also characterized by disorganized thought, which is manifested in speech and behavior" (p. 1822). Disorganized speech can be seen in many different capacities, it "may range from loose associations and moving quickly through multiple topics to speech that is so muddled that it resembles schizophasia (commonly referred to as 'word salad')" (p. 1822). This type of speech is confusing and repetitive and does not have an apparent meaning or any relationship between words. Disorganized behavior may produce significant problems in daily life, such as performing normal daily functions. This disorganized behavior can also appear as being silly like a child or having outbursts that are unpredictable.

There is no one sign or symptom that is specifically characteristic of schizophrenia (Schultz et al., 2007). Symptoms develop either progressively or appear abruptly and vary from one patient to another (Millier et al., 2014). According to both the *DSM-5* (American Psychiatric Association, 2013) and Schultz et al. (2007), symptoms must be present for the majority of one month and a few of the symptoms have to be present for at least six months for a person to be diagnosed with schizophrenia. Schizophrenia can have both remissions and relapses. “Cognitive deficits in schizophrenia are core features of the illness” (Rajji, Ismail, & Mulsant, 2009, p. 286). Millier et al. (2014) state that over time a slow decline in mental functioning and social relationships occur. This can lead “to a marked personality change, social isolation, occupational disability, cognitive impairment, and poor health” (Millier et al., 2014, p. 86), not to mention that schizophrenia is also a major risk factor of suicide. Due to deficits in social functioning, there is also an impact on quality of life (Couture et al., 2006).

Schizophrenia affects about 1% of the population (Leucht, Kissling, & McGrath, 2007). The annual incidence rate averages between 0.5 and 5.0 per 10,000 people (Alshowkan et al., 2012). It had been understood that both males and females had a similar risk of developing schizophrenia over their lifetime (Wyatt, Alexander, Egan, & Kirch, 1988). More recent studies have indicated that there is a greater lifetime risk for males to develop schizophrenia, with a male-female relative risk of about 1.4 to 1 (McGrath et al., 2004). The *DSM-5* (American Psychiatric Association, 2013) states that psychotic features of schizophrenia typically emerge between late adolescence and mid-30s. It also states that the initial psychotic episode is most likely to occur in the late 20s in females and early to mid-20s in males. There is actually another peak, particularly among women, which can occur around mid-life. Roughly 23% of people diagnosed with schizophrenia experience their first episode after age 40. In a very small sample, schizophrenia can have an onset after age 60 (Rajji et al., 2009). Finally, the onset of schizophrenia can occur in childhood or adolescence, typically after age 5. The prevalence of childhood or adolescent onset is 1 per 10,000 children and 1-2 per 1,000 adolescents. The reported rates for young males is higher than those for young females (Rajji et al., 2009).

Schizophrenia aggregates in families; a family history of schizophrenia is the most significant risk factor (Mortensen et al., 1999; Tandon, Keshavan, & Nasrallah, 2008). Tandon et al. (2008) state that more than two-thirds of instances of schizophrenia happen sporadically, but one's chance of developing schizophrenia rises when a relative experiences schizophrenia. There are other hypothetical risk factors such as maternal health, season of birth, and socioeconomic status of the parent (Schultz et al., 2007). Tandon et al. (2008) state that there are both biological and psychosocial risk factors. They state that nutritional deficiency, urbanicity, being male, migration, socio-economic status, and chromosomal abnormalities have all been found to potentially raise the risk for the occurrence of schizophrenia. Finally, the scientific knowledge about the cause of schizophrenia has substantially grown in recent years, with evidence that both environmental and genetic factors play important roles. It is still unknown what the specified contributing factors are and how they cause schizophrenia (Tandon et al., 2008).

Aside from the unknown etiology of schizophrenia, the boundaries of this disorder are also still unknown. Comorbid psychiatric problems frequently occur among patients with schizophrenia and this further complicates the clinical picture (Buckley, Miller, Lehrer, & Castle, 2009). Depression is the leading comorbidity condition with schizophrenia, but substance abuse and anxiety are also common to develop through the course of schizophrenia. An estimated prevalence is 29% for posttraumatic stress disorder, 50% for depression, and roughly 47% of people with schizophrenia have a comorbid substance abuse diagnosis (Buckley et al., 2009). “There is clearly an increased prevalence of anxiety, depression, and substance abuse disorders in patients with schizophrenia that occurs in excess of that in the general population” (Buckley et al., 2009, p. 396). Buckley et al. (2009) have found that these comorbidities occur in all the different phases of the course of schizophrenia. They found that depressive symptoms are very common in schizophrenia and contribute to a poorer outcome. Buckley et al. (2009) also state that substance abuse is particularly common and exacerbates the symptoms, although this is inextricably linked to treatment non-compliance. Finally, they state that for most “comorbidities, their presence is generally associated with more severe psychopathology and with poorer outcomes” (Buckley et al., 2009, p. 396).

Stigma and Schizophrenia

Schizophrenia is a misunderstood disorder, and there is stigma even though knowledge is lacking about the disorder and the symptoms. Overall, it is suggested that "lay people in the UK have a relatively limited understanding of the typical symptoms of schizophrenia" (Scior, Potts, & Furnham, 2013, p. 128). In the United States, Hamilton et al. (2006) found that there was some confusion about the meaning of schizophrenia when participants defined the disease in terms of positive symptoms only. A prominent theme across African-American groups was the notion that schizophrenia meant "multiple" or "split" personalities (Hamilton et al., 2006).

Looking at blatant stigma and how it affects those with schizophrenia, Dinos, Stevens, Serfaty, Weich, and King (2004) interviewed people who have had previous mental health difficulties and found that out of all the different diagnosed groups interviewed, those diagnosed with schizophrenia were more likely to report blatant experiences of stigma. The stigma reported included verbal abuse, physical abuse, loss of relationships, and explicit discrimination. Brain et al. (2014) found that many of the patients experienced and expected discrimination, particularly in social and intimate relationships. Over half of the patients felt ostracized and socially rejected. Koschorke et al. (2014) reported that 42% of people living with schizophrenia had experienced negative discrimination. Slightly more than 50% of the participants reported not participating in opportunities in the past year due to expecting negative reactions from others. Almost half (46%) said that they were "uncomfortable" or "very uncomfortable" about disclosing their illness. About 79% reported feeling alienated.

While pursuing physical health care, a third of the individuals experiencing schizophrenia who were interviewed said that they felt discriminated against. Stigmatization was felt by almost half of the patients due to the mental health staff (Koschorke et al., 2014). When university students were compared to adults in general, university students were associated with having more attitudes that were stigmatizing toward patients with schizophrenia (Magliano et al., 2011). Druss, Bradford, Rosenheck, Radford, and Krumholz (2000) looked at rates of certain heart procedures and found that "schizophrenia was associated with the greatest reduction in rates of the procedure; patients with this disorder were less than half as likely to undergo catheterization as the rest of the population" (p. 509). According to Üçok et al. (2012), employment was the most frequently reported area of perceived discrimination and an area in which discrimination frequently occurs. Anticipating discrimination can cause lowered confidence and this can cause poor performance in job interviews. If someone's mental illness becomes known by coworkers, the person may experience stigma and discrimination. Eventually, people experiencing schizophrenia may stop looking for work and believe that they are unemployable due to expected discrimination.

Gerlinger et al. (2013) found that perceived, experienced, and self-stigma are a significant concern to many patients with schizophrenia-related disorders. Over 60% of patients anticipated and perceived stigma, over 50% of patients faced stigma towards themselves, and almost 50% reported being alienated in some way and felt shame because of it. Lv, Wolf, and Wang (2013) state that they "aimed to explore psychiatric stigma among Chinese patients with schizophrenia" and "nearly 70% of respondents reported mild or moderate self-stigma" (p. 86). Lv et al. (2013) also state that even if discrimination does not occur, people with schizophrenia are still able to internalize discrimination towards people with mental illnesses, particularly those with schizophrenia. This can result in the development of high levels of self-stigma, which is when people internalize negative stereotypes that typically result in a decrease of self-esteem and self-efficacy (Lv et al., 2013).

Griffiths et al. (2006) gave surveys to people from Australia and Japan with stigma questions about people with chronic schizophrenia. The authors asked whether they believe that someone with chronic schizophrenia is discriminated against by others in their community; 83.2% and 62.6% of Australians and Japanese respondents answered yes. They found that when asked if they would vote for a politician with chronic schizophrenia, 67.5% of Australians and 73.8% of Japanese respectively said no. When asked if they believe that other people would employ someone with chronic schizophrenia, 83.7% of Australians and 79.2% of Japanese respondents said no. There was a question as to whether the respondents view those with chronic schizophrenia as being unpredictable and the majority of Australians, 67.5%, believe that they are. The majority of Australians, 82.5% of the respondents, believe that others think that those with chronic schizophrenia are unpredictable. Griffiths et al. (2006) also found that a greater proportion of respondents believe that a person with schizophrenia would be considered as dangerous and unpredictable by others.

Schizophrenia is viewed significantly more negatively than depression or anxiety (Angermeyer & Matschinger, 2003). Perceptions of dangerousness vary by mental disorder (Parcesepe & Cabassa, 2013). People with schizophrenia are seen as being more dangerous and unpredictable when compared to people with other mental illnesses (Angermeyer & Matschinger, 2003). There are multiple studies that show this association, even though the majority of people diagnosed with schizophrenia do not act aggressively (Angermeyer & Dietrich, 2006; Magliano, De Rosa, Malangone, & Maj, 2004).

Individuals with a diagnosis of schizophrenia are perceived as being more dangerous and less likely to return to their previous level of functioning than people with other diagnoses (Wood et al., 2014). When compared to people with depression, adults with schizophrenia and alcohol abuse are thought to be more of a danger to others and they are also seen as a danger to themselves (Anglin, Link, & Phelan, 2006). Over 80% of the general population in Italy and also about three fourths of mental health professionals believe that people experiencing schizophrenia are unpredictable (Magliano et al., 2004). A study of 236 Italian psychology undergraduate college students found that 59% believe that people with psychotic symptoms are dangerous, and 65% think that they are unpredictable (Magliano et al., 2014). In a separate study, the majority of participants, all of which were African American, believe symptoms associated with the disease can make affected individuals inherently dangerous and prone to violence (Hamilton et al., 2006). Over 70% of students in the medical field reported that people with schizophrenia are unpredictable. Between 20 and 80 percent believe that people with schizophrenia are violent, dangerous, and have a chronic, progressive illness (Magliano et al., 2011). Swanson et al. (2006) conducted a national study of violent behavior in people with schizophrenia. The researchers found that the prevalence of any type of violence in a 6-month period was 19.1%, and the report of serious violent behavior by participants was 3.6%. Particular clusters of symptoms were found to increase or decrease the risk in the participants with schizophrenia. Psychosis, depressive symptoms, conduct problems in childhood, and victimization were the symptoms that were found to be related to serious violence.

Relevance to College Students

This current study looked at college students' understanding and views on schizophrenia and people with schizophrenia. It is important to use a population containing college students for many reasons. The main reason relates to the typical age of onset of schizophrenia. The *DSM-5* (American Psychiatric Association, 2013) states that psychotic features of schizophrenia typically emerge between late adolescence and mid-thirties. It also states that "the peak age at onset for the first psychotic episode is in the early- to mid-20s for males and in the late-20s for females" (p. 102).

The lifetime prevalence rate for schizophrenia is 1%. Being in the age group that typically develops the disorder, the chances that one will know at least one person with this disorder are greater. It is important to understand the disorder, the symptoms, and the risks associated with it. It is also necessary to have a positive view of those with the disorder, understand the potential for recovery, and help decrease the stigma for the disorder. It is important to ensure that these students, our soon to be workforce and parents, understand the disorder and the associated symptoms. This study attempted to determine whether the negative stigma and the negative media portrayal of schizophrenia have influenced our students.

Hypotheses

This research aimed to explore undergraduate college psychology student perceptions of schizophrenia, which tends to be the most stigmatized of mental illnesses (Penn, Hope, Spaulding, & Kucera, 1994). An online survey was used to obtain students' perceptions. It was hypothesized that

1) Students would score a 60% or less on a quiz that was developed to assess participants' knowledge and understanding of schizophrenia.

2) Students would have stigmatizing views of those with schizophrenia and mental illnesses in general as demonstrated by scores on the Community Attitudes Toward the Mentally Ill (CAMI) Scale that are significantly greater than neutral on the *benevolence* and *community mental health ideology* dimensions and significantly lower than neutral on the *authoritarianism* and *social restrictiveness* dimensions. The neutral score is 3 for individual questions on the 5-point Likert scale and 30 when using the sum score. Stigmatizing views of those with schizophrenia and mental illnesses in general are indicated by scores on the two dimensions, *mental hygiene ideology* and *interpersonal etiology*, on the Opinions about Mental Illness (OMI) Scale that are significantly lower than neutral, which is 23.5 for the *mental hygiene ideology* dimension and 18.5 for the *interpersonal etiology* dimension.

3) Students classified as having less recognition and knowledge about schizophrenia were expected to exhibit significantly lower scores on the CAMI *social*

restrictiveness and *authoritarianism* dimensions (because lower scores indicate greater agreement with the dimension concept). Stated another way, Understanding Schizophrenia Quiz scores were hypothesized to positively correlate with the CAMI *social restrictiveness* and *authoritarianism* scores. Students who have less recognition and knowledge of schizophrenia were predicted to display significantly higher scores on the *benevolence* and *community mental health ideology* dimensions on the CAMI (i.e., Understanding Schizophrenia Quiz scores were predicted to be negatively correlated with *benevolence* and *community mental health ideology* scores). Students who scored lower on the Understanding Schizophrenia Quiz were expected to score lower on both the *mental hygiene ideology* and *interpersonal etiology* dimensions on the OMI scale (i.e., Understanding Schizophrenia Quiz scores were predicted to positively correlate with the *mental health ideology* and *interpersonal etiology* scores on the OMI).

CHAPTER II

METHOD

Participants

Participants were 120 individuals enrolled in General Psychology courses at Middle Tennessee State University. Individuals received credit in their psychology course for participation. To be eligible for the study, participants had to be between the ages of 18 and 29. Participants who had been hospitalized for mental illness or had a family member who had been hospitalized were asked to exclude themselves from the study by not signing up. Participants who took less than 10 minutes to complete all of the surveys or omitted more than 30 survey items were to be excluded from the study; however, no participants met these criteria for elimination. Multiple imputation was used for missing data. See Table 1 for frequencies of categorical demographic variables.

The majority of the participants were female. Half of the participants were Caucasian, followed by a third of the participants being African American. Most of the students who participated were between 18 and 21 years of age. Almost all of the participants have never been married and the remaining were married. Most of the students that participated were freshman in college.

Table 1

Frequencies for Categorical Demographic Variables

Variable	*n*	%
Gender		
Men	19	16
Women	101	84
Transgender	0	0
Other	0	0
Race		
Black/African American	38	32
Caucasian/White	63	53
Hispanic/Latino	4	3
Asian	6	5
Native Hawaiian/Pacific Islander	0	0
American Indian/Alaskan Native	1	1
Other	7	6
No Response	1	1
Age		
18-21	112	93
22-25	7	6
26-29	1	1
Marital Status		
Single/Never Married	117	98
Married	3	3
Divorced	0	0
Separated	0	0
Widowed	0	0
Years of Education		
12 years	39	33
13 years	49	41
14 years	22	18
15 years	8	7
16 years	0	0
17 years	1	1
Other	1	1

Note. $N = 120$.

Instrumentation

Demographic Questionnaire. A brief demographic questionnaire (See Appendix E) was developed for the study which documented the participants' gender, race, age, marital status, and years of education completed. All questions were multiple choice. In addition, participants were asked to exclude themselves from the study by not signing up if either they or a close family member has been hospitalized for any mental illnesses.

Understanding Schizophrenia Questionnaire. A 20 item quiz (See Appendix F) was developed for the study which was used to evaluate the participants' understanding and knowledge of schizophrenia. All questions were true/false. In this study, the internal consistency reliability (Cronbach's α) for the Schizophrenia Questionnaire was a low .09.

Opinions about Mental Illness Scale. The Opinions about Mental Illness (OMI) Scale (Cohen & Struening, 1962) is a scale that was developed to assess attitudes towards people with mental illnesses. The OMI has a long history of usage in many different populations and has five attitudinal dimensions: *authoritarianism*, *mental hygiene ideology*, *benevolence*, *social restrictiveness*, and *interpersonal etiology*.

Authoritarianism refers to the opinion that people with mental illnesses cannot be held accountable for their acts and they should be controlled by society. *Mental hygiene ideology* is a positive orientation that believes mental illness is an illness like any other and should be treated adequately like any other. *Benevolence* is the perception of the mentally ill in a paternalistic way and can be sympathetic, even though Todor (2013) states that *benevolence* is an attitude that could be placed between tolerance and pity/compassion. *Social restrictiveness* has a central belief that the mentally ill should be restricted in some functioning and in some social domains due to being a threat to society. *Interpersonal etiology* is a view that interpersonal experiences strongly contribute to the development of mental illness (Cohen & Struening, 1962).

Construct validation of the OMI was completed by Cohen and Struening (1962), who began with around "200 opinion items referring to the cause, description, treatment, and prognosis of severe mental illness" (p. 350). Cohen and Struening (1962) identified 51 items with their extensive factor analysis and these 51 items break into the five dimensions discussed to compose the final form of the OMI. This final version of the OMI, with 51 items, uses a 6-point Likert-type scale; ranging from *Strongly Agree* (1) to *Strongly Disagree* (6) (Struening & Cohen, 1963). In general, higher scores, scores greater than 3 (Todor, 2013), on a dimension reflect a more positive attitude and lower scores, scores less than 3 (Todor, 2013), reflect a generally less positive attitude toward mental illness.

The version used for this study was slightly different than the original version due to using only two dimensions, *mental hygiene ideology* and *interpersonal etiology*. It also omitted "The patients of a mental hospital should have something to say about the way the hospital is run," from the *mental hygiene ideology* dimension and added an item to that dimension, "Most mental patients are willing to work," that was not included in the original version of the OMI. The scores were adjusted for the item change. The OMI *mental hygiene ideology* dimension was calculated as

OMImentalhygiene = 48 + OMI27 - sum(OMI12,OMI13,OMI18,OMI23,OMI28,OMI41,OMI44,OMI50) due to the change in questions.

The OMI *mental hygiene ideology* dimension had a low Cronbach's α of .43. The OMI *interpersonal etiology* dimension was calculated at OMIinterpersonal = 43 - sum(OMI5,OMI10,OMI15,OMI20,OMI25,OMI30,OMI35). The *interpersonal etiology* dimension had a Cronbach's α of .70. The coding for the *mental hygiene ideology* and *interpersonal etiology* dimensions follows that of Struening and Cohen (1963). As such, higher scores indicate greater acceptance of the *mental hygiene ideology* hypothesis and the greater acceptance of the *interpersonal etiology* hypothesis.

Modified Community Attitudes Toward the Mentally Ill Scale. The Community Attitudes Toward the Mentally Ill (CAMI) Scale (Taylor & Dear, 1981; Taylor, Dear, & Hall, 1979) is a standardized tool that measures community attitudes towards mental illness in general. This version of the CAMI was modified for this study to focus on the attitudes towards those with schizophrenia, specifically.

In 1981, Taylor and Dear used the CAMI with a sample that contained 1,090 participants from Toronto. The CAMI was developed by using the two most comprehensive and validated scales that existed at the time; the OMI scale, discussed above, and the Community Mental Health Ideology (CMHI) scale (Taylor & Dear, 1981). In 1967, Baker and Schulberg created the CMHI scale that was designed to measure a person's commitment to a community mental health ideology. The CMHI consists of 38 opinion statements that express three different aspects of the specific ideology. These three subscales are total population, primary prevention, and community involvement. Total population refers to the opinion of the participant as to whether the general population, not merely consumers or those seeking psychiatric help, support community mental health. Efforts via environmental intervention and prevention attempts in the environment are primary prevention. The subscale community involvement includes the amount that resources from the community are used for treatment and assisting patients (Locke, 2010; Taylor & Dear, 1981). The OMI and the CMHI scales were the foundation of how Taylor and Dear (1981) measured attitudes toward the mentally ill.

The CAMI has 40 items and uses a 5-point Likert scale (5 = *Strongly Disagree* to 1 = *Strongly Agree*). The 40 items cover 4 dimensions. Each dimension has ten questions, five positively viewed and five negatively viewed questions. The first dimension is *authoritarianism*, the belief that people with mental illnesses are inferior and should be subjected to more authoritarian control. Lower scores on this dimension denote more coercive attitudes towards individuals who use mental health services. Second, *benevolence* is more of an attitude of moral paternalism towards those with mental illnesses. People with mental illness are seen as being more innocent like a child and those that score higher view individuals experiencing mental illness more positively. Next is *social restrictiveness*, which signifies a belief in putting more restrictions on the mentally ill because they pose a threat to the community. Lower scores on the *social restrictiveness* dimension represent fear of the mentally ill. Finally, *community mental health ideology* reflects the attitudes of both individuals and the larger community to mental health facilities. Lower scores on this dimension indicate more accepting attitudes towards mental health clients (Taylor & Dear, 1981).

The CAMI was developed so that two dimensions (*benevolence* and *community mental health ideology*) reflected positive attitudes towards the mentally ill, while the other two (*authoritarianism* and *social restrictiveness*) reflected negative attitudes towards the mentally ill. Each individual subscale score can range from 10 to 50. Once appropriate items have been reversed, depending on the statement, lower scores on any dimension indicate greater agreement with the dimension concept, and high scores represent general disagreement with the dimension concept (Cotton, 2004).

Taylor and Dear (1981) found that three of the four dimensions have high reliability: *community mental health ideology* ($\alpha = .88$), *social restrictiveness* ($\alpha = .80$), and *benevolence* ($\alpha = .76$). *Authoritarianism* has a lower reliability but it is still satisfactory ($\alpha = .68$). The internal consistencies for the CAMI were similar: *community mental health ideology* ($\alpha = .86$), *benevolence* ($\alpha = .77$), *social restrictiveness* ($\alpha = .76$), and *authoritarianism* ($\alpha = .65$) (Locke, 2010). High levels of internal validity were shown for the final version of the CAMI based on item-scale correlations, alpha coefficients, and factor analysis (Taylor & Dear, 1981).

By analyzing relationships between the attitude scales and a variety of personal characteristics, the construct validity was assessed. The strength, direction, and consistency of the relationships for both the construct and predictive validity provided strong support for the external validity of the CAMI dimensions (Taylor & Dear, 1981).

Taylor and Dear's (1981) study demonstrated the theoretical and practical significance of the CAMI and the CAMI dimensions.

Cotton (2004) conducted a study to measure the attitudes of 138 Canadian police officers toward the mentally ill. The officers were asked to complete the CAMI to evaluate their attitudes on the four dimensions of the CAMI. Cotton (2004) did a comparison of attitudes toward the mentally ill of the police officers with the original Canadian sample by Taylor and Dear (1981). Cotton (2004) found that most police officers did not oppose working with people experiencing mental illness.

Cotton (2004) stated that the officers generally showed moderately high levels of *benevolence*, moderate endorsement of *community mental health ideology*, and a lower level of *authoritarianism* and *social restrictiveness*, which can be seen in Table 2. There are no definitive norms but Cotton (2004) labeled each score with what he thought each score represented, assuming that the scores can be related to the scoring of each individual question, 1 = *Strongly Agree*, 2 = *Agree*, 3 = *Neutral*, 4 = *Disagree*, and 5 = *Strongly Disagree*. Cotton (2004) stated that back on the 1 to 5 scale the average response on the *benevolence* dimension was 2.08, which indicates that officers generally agreed with the items. For *community mental health ideology* the average score was 2.65, which appears to be confusing with the applied scoring definitions. Cotton (2004) clarified that this score does represent the "belief in the therapeutic value of the community, the importance of integrating the mentally ill into normal neighborhoods, and a general acceptance of the principle of deinstitutionalization" (p. 140). Cotton (2004) presented data from Taylor and Dear (1981) and the mean scores for their original sample, which can be seen in Table 2. Taylor and Dear (1981) did not report the standard deviations.

Table 2

Community Attitudes Toward the Mentally Ill (CAMI) Results Summary

Article	Measure	Benevolence	Community Mental Health Ideology	Authoritar-ianism	Social Restrictiveness
Taylor & Dear 1981[a]	*M*	22.5	24.2	35.4	36.4
	SD	-	-	-	-
	n	-	-	-	-
Cotton 2004	*M*	20.8	26.5	36.9	36.1
	SD	3.8	5.8	3.6	4.6
	n	138	138	138	138
Thornton & Wahl 1996 Stigma groups	*M*	23.57	30.30	33.93	33.67
	SD	4.93	6.43	4.42	4.92
	n	30	30	30	30
Thornton & Wahl 1996 Control groups	*M*	23.00	24.93	36.70	35.57
	SD	3.69	5.12	3.38	3.63
	n	30	30	30	30
Current study	*M*	21.82	26.44	34.92	35.30
	SD	4.97	5.25	4.01	5.42
	n	119	119	118	119

[a]Standard deviations were not reported in the original Taylor and Dear (1981) study. In addition, for the Taylor and Dear (1981) study, the means in the original study were reported by gender so only the results for the males are presented here since over 80% of the sample were male.

Thornton and Wahl (1996) investigated the results of the CAMI using a stigma group (n = 30), which read a stigmatizing newspaper article before they completed the CAMI, and a control group (n = 30), who did not read a stigmatizing newspaper article. There were two other groups; the Prophylactic-Information and Prophylactic-Media groups, whose scores were not used in this study. The researchers used participants that were student volunteers from Introductory Psychology classes from a private school in Connecticut. Thornton and Wahl (1996) hypothesized that the stigma groups would obtain significantly lower scores (lower scores indicate greater agreement with the dimension concepts) on the CAMI *social restrictiveness* dimension and significantly higher scores on the CAMI *community mental health ideology* dimension compared to the control groups, which can be seen in Table 2.

The internal consistency reliability (Cronbach's α) of the *social restrictiveness* dimension found for this study was .71. The *authoritarianism* dimension had a Cronbach's α of .47. The *benevolence* dimension was found to be .81. The Cronbach's α for the *community mental health ideology* dimension was .83.

Procedure

Before any data were collected, permission from the Middle Tennessee State University (MTSU) Institutional Review Board (IRB) was obtained. Permission was obtained to use the CAMI through Oxford University Press. The OMI is found in the article by Cohen and Struening in 1962, and the content is in the public domain.

The questionnaires (demographics, Understanding Schizophrenia Quiz, OMI, and modified CAMI) were to be completed by General Psychology students from MTSU.

The General Psychology students signed up via the Sona System, which is the online sign up for experiments at MTSU. Before the survey was begun, informed consent was obtained from the participant through an explanation page about purpose, benefits, and risks of participating in the study. The students clicked a box that signified consent before proceeding to the first questionnaire. Personally identifying information was gathered by the Sona System only to give the participation credit required for the General Psychology course. The answers to the questionnaires were not linked to the identifying data.

Data Analysis

Descriptive statistics were computed initially in order to ensure there were no missing data and to observe the patterns in the data as well as examine the normality of the dependent variables. Multiple imputation was used for missing data. Coefficient alphas were reported for each of the CAMI, OMI, and Understanding Schizophrenia Quiz scales.

The first hypothesis examined knowledge and understanding of schizophrenia. For the purposes of this study, participants were classified as having knowledge or as lacking knowledge of schizophrenia according to the score on the Understanding Schizophrenia Quiz. Having knowledge of schizophrenia was defined as scoring higher than a 12 out of 20 on the quiz. To test the first hypothesis, a one sample *t*-test was used to determine whether the mean Understanding Schizophrenia Quiz scores were significantly higher than 60%.

The second hypothesis looked for stigmatizing views towards those with schizophrenia by using the four dimensions of the CAMI and toward those with mental illnesses in general with two dimensions of the OMI. For analyzing the results for the second hypothesis, a one sample *t*-test ($\alpha = .01$) was used to test whether students' scores were significantly different than neutral for both the CAMI and the OMI dimensions.

To test the third hypothesis, the individual dimension scores from both the CAMI and OMI were correlated ($\alpha = .01$) with the scores from the Understanding Schizophrenia Quiz. Understanding Schizophrenia Quiz scores were hypothesized to positively correlate with the CAMI *social restrictiveness* and *authoritarianism* scores. Understanding Schizophrenia Quiz scores were hypothesized to negatively correlate with *benevolence* and *community mental health ideology* scores on the CAMI. Understanding Schizophrenia Quiz scores were hypothesized to positively correlate with the *mental hygiene ideology* and *interpersonal etiology* scores on the OMI.

CHAPTER III

RESULTS

Hypothesis 1

Hypothesis 1 stated that students would score a 60% or less on the Understanding Schizophrenia Quiz, which was developed to assess participants' knowledge and understanding of schizophrenia. The average score (M = 62.92, SD = 11.86) was significantly higher than the predicted 60%, with $t(119) = 2.70$; $p < .01$. Therefore, hypothesis 1 was not supported.

Hypothesis 2

Hypothesis 2 stated that the scores on the CAMI would be significantly greater than neutral (a score of 3) on the *benevolence* and *community mental health ideology* dimensions and significantly lower than neutral on the *authoritarianism* and *social restrictiveness* dimensions. Hypothesis 2 also stated that the scores on the two dimensions, *mental hygiene ideology* and *interpersonal etiology*, on the OMI would be significantly lower than neutral. The analyses found significant differences in all four CAMI dimensions when compared with neutral, but the results were opposite of what was hypothesized. When compared to neutral, the scores on *benevolence* (M = 2.18, SD = 0.50) and *community mental health ideology* (M = 2.64, SD = 0.53) were significantly lower than neutral. The scores on *authoritarianism* (M = 3.49, SD = 0.40) and *social restrictiveness* (M = 3.53, SD = 0.54) were significantly higher than neutral. Table 2 shows the means of total dimension scores (a range of 10 to 50) while the means shown here are item scores (a range of 1 to 5). Table 3 displays the results of the t-tests.

Additional *t*-tests were conducted on the two dimensions, *mental hygiene ideology* and *interpersonal etiology*, of the OMI. Both of the analyses found significant differences. The scores on the *mental hygiene ideology* dimension were significantly higher than neutral, which is opposite of what was hypothesized. On the other hand, the *interpersonal etiology* dimension was significantly lower than neutral, as hypothesized. Table 4 displays the descriptive statistics and results of the *t*-tests.

Table 3

Independent t-tests for CAMI Dimensions

Variable	*n*	*t*	*df*	*p* <
Benevolence	119	-17.95	118	.001
Community Mental Health Ideology	119	-7.40	118	.001
Authoritarianism	118	13.34	117	.001
Social Restrictiveness	119	10.67	118	.001

Table 4

Descriptive Statistics and Independent t-tests for OMI Dimensions

Variable	*n*	*M*	*SD*	*t*	*df*	*p* <
Mental Hygiene Ideology	120	25.39	4.84	4.29	119	.001
Interpersonal Etiology	120	12.75	5.20	-12.12	119	.001

Hypothesis 3

Hypothesis 3 stated that participants scoring low on recognition and knowledge of schizophrenia were hypothesized to score low on CAMI *social restrictiveness* and *authoritarianism* dimensions. Students possessing less recognition and knowledge of schizophrenia were expected to display significantly higher scores on the *benevolence* and *community mental health ideology* dimensions on the CAMI. Also, students who scored lower on the Understanding Schizophrenia Quiz were expected to score lower on both the *mental hygiene ideology* and *interpersonal etiology* dimensions on the OMI scale.

Neither the *social restrictiveness*, $r = .08$, $p = .20$, nor *authoritarianism*, $r = -.01$, $p = .45$, dimensions were significantly correlated with knowledge about schizophrenia. Neither were students' recognition and knowledge about schizophrenia correlated with scores on the *benevolence,* $r = -.06$, $p = .27$, or the *community mental health ideology*, $r = .08$, $p = .18$, dimensions.

There were no significant correlations between the student's scores on the Understanding Schizophrenia Quiz and the *mental hygiene ideology*, $r = -.19$, $p = .02$ and *interpersonal etiology*, $r = -.20$, $p = .02$, OMI dimensions. Table 5 displays the correlations between all of the four CAMI and two OMI dimensions with the results of the Understanding Schizophrenia Quiz.

Table 5

Pearson Correlations with Schizophrenia Knowledge

	1	2	3	4	5	6	7
1) CAMI Community Mental Health Ideology		.51**	-.43**	-.54**	.17	-.39**	.08
2) CAMI benevolence			-.54**	-.48**	.31**	-.28**	-.06
3) CAMI authoritarianism				.49**	-.31**	.32**	-.01
4) CAMI social restrictiveness					-.24**	.31**	.08
5) OMI Interpersonal Etiology						.17	-.20
6) OMI Mental Hygiene Ideology							-.19
7) Schizophrenia Knowledge							

Note. n varies from 118 to 120 for all correlations. **Correlation is significant at the .01 level (1-tailed).

CHAPTER IV

DISCUSSION

General Findings

The results from this study did not support Hypothesis 1 in that the average score on the Understanding Schizophrenia Quiz was significantly higher than 60%. Other studies have found that people have a limited understanding of schizophrenia (Hamilton et al., 2006; Scior et al., 2013). In the current study, however, the college students' knowledge and understanding of schizophrenia marginally, but significantly, exceeded the predicted level. Because this study is the first one using the Understanding Schizophrenia Quiz, a direct comparison with previous studies is not possible.

The results from this study did not support Hypothesis 2 because participants did not show stigmatizing views on the CAMI scores. The findings are consistent with results showing lower levels than neutral on the *benevolence* and *community mental health ideology* dimensions and higher levels on the *authoritarianism* and *social restrictiveness* dimensions. Cotton (2004) found similar results in that police officers generally showed moderately high levels of *benevolence*, moderate endorsement of *community mental health ideology*, and lower levels of both *authoritarianism* and *social restrictiveness*, which can be seen in Table 2. These results show that on average the students agree with a more paternalistic attitude towards those with mental illness and they generally have a more accepting attitude toward mental health clients. On average, the students disagreed with the belief that people with mental illnesses are inferior and they are a threat to the community. The *mental hygiene ideology* dimension scores did not support Hypothesis 2 because the scores were higher than neutral, which shows that there was agreement with the belief underlying the dimension, that mental illness is an illness like any other and should be treated as such. In addition, students appeared to agree more with *interpersonal etiology* that assesses the belief that mental illnesses are a consequence of interpersonal experiences.

Results from this study did not support Hypothesis 3. It was thought that students' understanding of schizophrenia would be negatively correlated with agreement toward the *social restrictiveness* and *authoritarianism* dimensions, indicating that those with more knowledge of schizophrenia would have more positive views toward schizophrenia. It was also thought that there would be a positive correlation between understanding of schizophrenia and a more positive view of schizophrenia through the *benevolence* and *community mental health ideology* dimensions, but neither of these were found to be true. The hypothesis was not supported with the two OMI dimensions. Students' scores on the Understanding Schizophrenia Quiz showed no relationship to the scores on the *mental hygiene ideology* and *interpersonal etiology* dimensions. All of these results indicate that the amount of basic knowledge about schizophrenia may not be the primary determinant of attitudes towards individuals with schizophrenia.

Limitations

The current study had some limitations. First, the sample was not representative of the typical university population. It was a sample of students in psychology courses recruited using a research pool and was used out of convenience. Ideally, the sample of students would have an equal number of men and women. This study however, had 19 men and 101 women, which is approximately 84% women and 16% men. Consequently, generalization of the results to males should be made with caution.

Second, the Understanding Schizophrenia Quiz is a limitation because it should be refined. This is a limitation because this test was not used in any trials beforehand to determine whether or not the test accurately assesses one's understanding of schizophrenia.

Finally, caution should be used when comparing results from the OMI with other studies because this study calculated the results slightly differently due to the omission of a question.

Future Research

There are a few aspects that require future investigation. We need to gain a better understanding of peoples' perceptions towards mental disorders, and schizophrenia in particular. If we increase our knowledge about the public's perceptions, the knowledge can help in the development of effective anti-stigma interventions. It is essential to improve our anti-stigma campaigns and interventions so they can be both effective in the moment and long-lasting so we can sustain change. Investigation needs to be done on reducing stigma when associated with mental health care as well. There are stigmatizing perceptions towards treatment for mental illness. The more knowledge we have about these negative perceptions towards treatment, it is possible that we can increase the chances that people will attempt treatment and be consistent with their mental health care. It is also essential that we work closely with the media to express more factual information about both mental illness and treatment for mental illness.

REFERENCES

Alshowkan, A., Curtis, J., & White, Y. (2012). Quality of life for people with schizophrenia: A literature review. *The Arab Journal of Psychiatry*, *23*(2), 122-131. doi:10.4172/2375-5756.1000295

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.

Angermeyer, D. C., & Dietrich, S. (2006). Public beliefs about and attitudes towards people with mental illness: A review of population studies. *Acta Psychiatrica Scandinavica*, *113*, 163-179. doi:10.1111/j.1600-0447.2005.00699.x

Angermeyer, M. C., & Matschinger, H. (2003). Public beliefs about schizophrenia and depression: Similarities and differences. *Social Psychiatry and Psychiatric Epidemiology*, *38*, 526-534. doi:10.1007/500127-003-0676-6

Anglin, D. M., Link, B. G., & Phelan, J. C. (2006). Racial differences in stigmatizing attitudes toward people with mental illness. *Psychiatric Services*, *57*(6), 857-862. doi:10.1176/appi.ps.57.6.857

Bateson, G., Jackson, D. D., Haley, J., & Weakland, J. (1956). Toward a theory of schizophrenia. *Behavioral Science*, *1*(4), 251-254. doi:10.1002/bs.3830010402

Bourdieu, P. (1987). What makes a social class? On the theoretical and practical existence of groups. *Berkeley Journal of Sociology*, *32*, 1-18.

Bourdieu, P. (1990). *The logic of practice*. Stanford, CA: Stanford University Press.

Boyd, J. E., Adler, E. P., Otilingam, P. G., & Peters, T. (2014). Internalized Stigma of Mental Illness (ISMI) scale: A multinational review. *Comprehensive Psychiatry*, *55*, 221-231. doi:10.1016/j.comppsych.2013.06.005

Brain, C., Sameby, B., Allerby, K., Quinlan, P., Joas, E., Lindström, E., … Waern, M. (2014). Stigma, discrimination and medication adherence in schizophrenia: Results from the Swedish COAST study. *Psychiatry Research*, *220*, 811-817. doi:10.1016/j.psychres.2014.10.016

Brakel, W. H. (2006). Measuring health-related stigma: A literature review. *Psychology Health and Medicine*, *11*(3), 307-334. doi:10.1080/13548500600595160

Buckley, P. F., Miller, B. J., Lehrer, D. S., & Castle, D. J. (2009). Psychiatric comorbidities and schizophrenia. *Schizophrenia Bulletin*, *35*(2), 383-402. doi:10.1093/schbul/sbn135

Cohen, J., & Struening, E. L. (1962). Opinions about mental illness in the personnel of two large mental hospitals. *Journal of Abnormal and Social Psychology*, *64*, 349-360. doi:10.1037/h0045526

Corrigan, P.W., Green, A., Lundin, R., Kubiak, M.A., & Penn, D.L. (2001). Familiarity with and social distance from people who have serious mental illness. *Psychiatric Services*, *52*(7), 953-958. doi:10.1176/appi.ps.52.7.953

Corrigan, P. W., Kuwabara, S. A., & O'Shaughnessy, J. (2009). Public stigma of mental illness and drug addiction. *Journal of Social Work*, *9*(2), 139-147. doi:10.1177/1468017308101818

Corrigan, P. W., & Penn, D. L. (1999). Lessons from social psychology on discrediting psychiatric stigma. *American Psychologist*, *54*(9), 765-776. doi:10.1037/0003066x.54.9.765

Corrigan, P. W., & Shapiro, J. R. (2010). Measuring the impact of programs that challenge the public stigma of mental illness. *Clinical Psychology Review*, *30*(8), 907-922. doi:10.1016/j.cpr.2010.06.004

Corrigan, P. W., & Watson, A. C. (2002). Understanding the impact of stigma on people with mental illness. *World Psychiatry*, *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 Clinical Psychology*, *25*, 875-884. doi:10.1521/jscp.2006.25.8.875

Cotton, D. (2004). The attitudes of Canadian police officers toward the mentally ill. *International Journal of Law and Psychiatry*, *27*, 135-146. doi:10.1016/j.ijlp.2004.01.004

Couture, S. M., & Penn, D. L. (2003). Interpersonal contact and the stigma of mental illness: A review of the literature. *Journal of Mental Health*, *12*(3), 291-305. doi:10.1080/09638231000118276

Couture, S. M., Penn, D. L., & Roberts, D. L. (2006). The functional significance of social cognition in schizophrenia: A review. *Schizophrenia Bulletin*, *32*(S1), S44-S63. doi:10.1093/schbul/sbl029

Dinos, S., Stevens, S., Serfaty, M., Weich, S., & King, M. (2004). Stigma: The feelings and experiences of 46 people with mental illness. *British Journal of Psychiatry*, *184*, 176-181. doi:10.1192/bjp.184.2.176

Druss, B. G., Bradford, D. W., Rosenheck, R. A., Radford, M. J., & Krumholz, H. M. (2000). Mental disorders and use of cardiovascular procedures after myocardial infarction. *The Journal of the American Medical Association*, *283*(4), 506-511. doi:10/1001/jama.283.4.506

Gerlinger, G., Hauser, M., De Hert, M., Lacluyse, K., Wampers, M., & Correll, C. U. (2013). Personal stigma in schizophrenia spectrum disorders: A systematic review of prevalence rates, correlates, impact, and interventions. *World Psychiatry*, *12*, 155-164. doi:10.1002/wps.20040

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

Graves, R. E., Cassisi, J. E., & Penn, D. L. (2005). Psychophysiological evaluation of stigma towards schizophrenia. *Schizophrenia Research*, *76*, 317-327. doi:10.1016/j.schres.2005.02.003

Griffiths, K. M., Nakane, Y., Christensen, H., Yoshioka, K., Jorm, A. F., & Nakane, H. (2006). Stigma in response to mental disorders: A comparison of Australia and Japan. *BMC Psychiatry*, *6*(21), 1-12. doi:10.1186/1471-244x-6-21

Hamilton, L. A., Aliyu, M. H., Lyons, P. D., May, R., Swanson, C. L., Savage, R., & Rodney, C. P. (2006). African-American community attitudes and perceptions toward schizophrenia and medical research: An exploratory study. *Journal of National Medical Association*, *98*, 18-27.

Jones, E. E., Farina, A., Hastorf, A. H., Marcus, H., Miller, D. T., & Scott, R. A. (1984). *Social stigma: The psychology of marked relationships*. New York, NY: Freeman and Company.

Koschorke, M., Padmavati, R., Kumar, S., Cohen, A., Weiss, H. A., Chatterjee, S., … Patel, V. (2014). Experiences of stigma and discrimination of people with schizophrenia in India. *Social Science & Medicine*, *123*, 149-159. doi:10.1016/j.socscimed.2014.10.035

Kurzban, R., & Leary, M. R. (2001). Evolutionary origins of stigmatization: The functions of social exclusion. *Psychological Bulletin*, *127*(2), 187-208. doi:10.1037//0033-2909.127.2.187

Leucht, S., Kissling, W., & McGrath, J. (2007). Lithium for schizophrenia. *Cochrane Database System Review*, *3*. doi:10.1002/14651858.CD003834.pub2

Link, B. G., & Phelan, J. C. (2001). Conceptualizing stigma. *Annual Review of Sociology*, *27*(3), 363-385. doi:10.1146/annurev.soc.27.1.363

Link, B. G., & Phelan, J. C. (2013). Labeling and stigma. In C. S. Aneshensel, J. C. Phelan, & A. Bierman (Eds.), *Handbook of the sociology of mental health (2nd. ed)* (pp. 525-541). Dordrecht: Springer. doi:10.1007/978-94-007-4276-5_25

Link, B. G., Yang, L. H., Phelan, J. C., & Collins, P. Y. (2004). Measuring mental illness stigma. *Schizophrenia Bulletin*, *30*(3), 511-541. doi:10.1093/oxfordjournals.schbul.a007098

Locke, C. R. (2010). Public attitudes toward mental illness: An experimental design examining the media's impact of crime on stigma (Unpublished doctoral dissertation). Ohio State University, Columbus, OH.

Lv, Y., Wolf, A., & Wang, X. (2013). Experienced stigma and self-stigma in Chinese patients with schizophrenia. *General Hospital Psychiatry*, *35*, 83-88. doi:10.1016/j.genhosppsych.2012.07.007

Magliano, L. F., De Rosa, A., Malangone, C., & Maj, M. C. (2004). Beliefs about schizophrenia in Italy: A comparative nationwide survey of the general public, mental health professionals, and patients' relatives. *Canadian Journal of Psychiatry*, *49*, 322-330.

Magliano, L., Read, J., Rega, S., Oliviero, N., Sagliocchi, A., Patalano, M., & D'Ambrosio, A. (2011). The influence of causal explanations and diagnostic labeling on medical students' views of schizophrenia. *Academic Medicine*, *86*, 1155-1162. doi:10.1097/acm.0b013e318226708e

Magliano, L., Read, J., Sagliocchi, A., Oliciero, N., D'Ambrosio, A., Campitiello, F., … Patalano, M. (2014). "Social dangerousness and incurability in schizophrenia": Results of an educational intervention for medical and psychology students. *Psychiatry Research*, *219*(3), 457-463. doi:10.1016/j.psychres.2014.06.002

McGrath, J., Saha, S., Welham, J., El Saadi, O., MacCauley, C., & Chant, D. (2004). A systematic review of the incidence of schizophrenia: The distribution of rates and the influence of sex, urbanicity, migrant status and methodology. *BMC Medicine*, *2*(13), 1-22. doi:10.1186/1741-7015-2-13

Millier, A., Schmidt, U., Angermeyer, M. C., Chauhan, D., Murthy, V., Toumi, M., & Cadi-Soussi, N. (2014). Humanistic burden in schizophrenia: A literature review. *Journal of Psychiatric Research*, *54*, 85-93. doi:10.1016/j.jpsychires.2014.03.021

Mortensen, P. B., Pedersen, C. B., Westergaard, T., Wohlfahrt, J., Ewald, H., & Mors, O. (1999). Effects of family history and place and season of birth on the risk of schizophrenia. *New England Journal of Medicine*, *340*, 603-608. doi:10.1056/NEJM199902253400803

Parcesepe, A. M., & Cabassa, L. J. (2013). Public stigma of mental illness in the United States: A systematic literature review. *Administration Policy Mental Health*, *40*(5). doi:10.1007/s10488-012-0430-z

Penn, D. L., Hope, D. A., Spaulding, W., & Kucera, J. (1994). Social anxiety in schizophrenia. *Schizophrenia Research*, *11*(3), 277-284. doi:10.1016/0920-9964(94)90022-1

Phelan, J. C., Link, B. G., & Dovidio, J. F. (2008). Stigma and prejudice: One animal or two? *Social Science & Medicine*, *67*, 358-367. doi:10.1016/j.socscimed.2008.03.022

Phelan, J. C., Link, B. G., Stueve, A., & Pescosolido, B. (2000). Public conceptions of mental illness in 1950 and 1996: What is mental illness and is it to be feared? *Journal of Health and Social Behavior*, *41*(2), 188-207.

Pingani, L., Vecchio, V. D., Luciano, M., Hamati, A., Rigatelli, M., Evans-Lacko, S., ... Fiorillo, A. (2015). University students' identification of stigmatizing schizophrenia in Italian newspapers. *American Journal of Orthopsychiatry*, *85*(2), 139-144. doi:10.1037/ort0000053

Rajji, T. K., Ismail, Z., & Mulsant, B. H. (2009). Age at onset and cognition in schizophrenia: Meta-analysis. *The British Journal of Psychiatry*, *195*, 286-293. doi:10.1192/bjp.bp.108.060723

Schultz, S. H., North, S. W., & Shields, C. G. (2007). Schizophrenia: A review. *American Family Physician*, *75*(12), 1821-1829.

Schulze, B., & Angermeyer, M. C. (2003). Subjective experiences of stigma. A focus group study of schizophrenic patients, their relatives and mental health professionals. *Social Science & Medicine*, *56*, 299-312. doi:10.1016/S0277-9536(02)00028-x

Scior, K., Potts, H. W., & Furnham, A. F. (2013). Awareness of schizophrenia and intellectual disability and stigma across ethnic groups in the UK. *Psychiatric Research*, *208*, 125-130. doi:10.1016/j.psychres.2012.09.059

Seeman, N., Tang, S., Brown, A. D., & Ing, A. (2016). World survey of mental illness stigma. *Journal of Affective Disorders*, *190*, 115-121. doi:10.1016/j.jad.2015.10.011

Stigma. (n.d.). In *Oxford English Dictionary*. Retrieved from http://www.oxforddictionaries.com/definition/english/stigma

Struening, E. L., & Cohen, J. (1963). Factorial invariance and other psychometric characteristics of five opinions about mental illness factors. *Educational and Psychological Measurement*, *13*(2), 289- 298.

Swanson, J. W., Swartz, M.S., Van Dorn, R. A., Elbogen, E. B., Wagner, H. R., Rosenheck, R. A., … Lieberman, J. A. (2006). A national study of violent behavior in persons with schizophrenia. *Archives of General Psychiatry*, *63*(5), 490-499. doi:10.1001/archpsyc.63.5.490

Tandon, R., Keshavan, M. S., & Nasrallah, H. A. (2008). Schizophrenia, "just the facts" what we know in 2008. 2. Epidemiology and etiology. *Schizophrenia Research*, *102*, 1-18. doi:10.1016/j.schres.2008.04.011

Taylor, S. M., & Dear, M. J. (1981). Scaling community attitudes toward the mentally ill. *Schizophrenia Bulletin*, *7*(2), 225-240. doi:10.1093/schbul/7.2.225

Taylor, S. M., Dear, M. J., & Hall, G .B. (1979). Attitudes toward the mentally ill and reactions to mental health facilities. *Social Science & Medicine*, *13*, 281-290. doi:10.1016/0160-8002(79)90051-0

Thornton, J. A., & Wahl, O. F. (1996). Impact of a newspaper article on attitudes toward mental illness. *Journal of Community Psychology*, *24*, 17-25. doi: 10.1002/(SICI)1520-6629(199601)24:13.0.CO;2-0

Todor, I. (2013). Opinions about mental illness. *Procedia- Social and Behavioral Sciences*, *82*, 209-214. doi:10.1016/j.sbspro.2013.06.247

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 for Mental Health.

Üçok, A., Brohan, E., Rose, D., Sartorius, N., Leese, M., Yoon, C. K., … Thornicroft, G. (2012). Anticipated discrimination among people with schizophrenia. *Acta Psychiatrica Scandinavica*, *125*, 77-83. doi: 10.1111/j.1600-0447.2011.01772.x

Wood, L., Birtel, M., Alsawy, S., Pyle, M., & Morrison, A. (2014). Public perceptions of stigma towards people with schizophrenia, depression, and anxiety. *Psychiatry Research*, *220*, 604-608. doi:10.1016/j.psychres.2014.07.012

Wyatt, R. J., Alexander, R. C., Egan, M. F., & Kirch, D. G. (1988). Schizophrenia, just the facts: What do we know, how well do we know it? *Schizophrenia Research*, *1*, 3-18. doi:10.1016/0920-9964(88)90034-5

APPENDICES

APPENDIX A

IRB APPROVAL

IRB
INSTITUTIONAL REVIEW BOARD
Office of Research Compliance,
010A Sam Ingram Building,
2269 Middle Tennessee Blvd
Murfreesboro, TN 37129

MIDDLE TENNESSEE STATE UNIVERSITY

IRBN007 – EXEMPTION DETERMINATION NOTICE

Wednesday, September 21, 2016

Investigator(s): Shelby E. Herron; Dr. David Kelly
Investigator(s') Email(s): seh6c@mtmail.mtsu.edu; David.Kelly@mtsu.edu
Department: Psychology

Study Title: Undergraduate Psychology Students' Perceptions of Schizophrenia
Protocol ID: **17-1009**

Dear Investigator(s),

The above identified research proposal has been reviewed by the MTSU Institutional Review Board (IRB) through the **EXEMPT** review mechanism under 45 CFR 46.101(b)(2) within the research category *(2) Educational Tests* A summary of the IRB action and other particulars in regard to this protocol application is tabulated as shown below:

IRB Action	EXEMPT from furhter IRB review***	
Date of expiration	**NOT APPLICABLE**	
Participant Size	120	
Participant Pool	**MTSU SONO System Participants**	
Mandatory Restrictions	No identifiable information will be collected and only aduults 18 and older will participate.	
Additional Restrictions	**n/a**	
Comments		
Amendments	**Date**	**Post-Approval Amendments**
	9-27-16	Approved Addendum Request to change protocol description in SONA system to meet SONA text length restrictions

***This exemption determination only allows above defined protocol from further IRB review such as continuing review. However, the following post-approval requirements still apply:

- Addition/removal of subject population should not be implemented without IRB approval
- Change in investigators must be notified and approved
- Modifications to procedures must be clearly articulated in an addendum request and the proposed changes must not be incorporated without an approval
- Be advised that the proposed change must comply within the requirements for exemption
- Changes to the research location must be approved – appropriate permission letter(s) from external institutions must accompany the addendum request form
- Changes to funding source must be notified via email (irb_submissions@mtsu.edu)
- The exemption does not expire as long as the protocol is in good standing

APPENDIX B

ONLINE STUDY INFORMATION

Study Name: Undergraduate Psychology Students' Perceptions of Schizophrenia

Abstract: This study will be investigating the knowledge and attitudes of undergraduate psychology students toward mental illness, specifically schizophrenia, with questionnaires. These questionnaires will be used to assess students' knowledge of, views towards, and reactions to people with mental illness, and schizophrenia in particular.

Description: You will complete questionnaires about your demographic information, your knowledge of schizophrenia, and your views toward those with mental illness and schizophrenia in particular. Your responses are anonymous and your name cannot be connected to your responses. The questionnaires should take no longer than 30 minutes. You will receive 1 research credit for participating in the current research. The only cost to you is the time spent answering the questions and there are no foreseeable risks to you from this study.

Web Study: This study is an online survey administered by the system. Participants are only identified to researchers with a unique numberic ID code.

Duration: 30 minutes

Credits: 1 Credit

Researchers:

Shelby Herron
Email: seh6c@mtmail.mtsu.edu

David Kelly
Email: David.Kelly@mtsu.edu

Dana Fuller
Email: Dana.Fuller@mtsu.edu

Online (web) study administered by the system IRB Approval Code 17-1009 (expires September 21, 2017)

APPENDIX C

INFORMED CONSENT

Principal Investigator: Shelby Herron
Study Title: Undergraduate Psychology Students' Perceptions of Schizophrenia
Institution: Middle Tennessee State University

The following information is provided to inform you about the research project and your participation in it. Please read this form carefully and feel free to contact the investigators to ask any questions you may have about this study and the information given below. Contact information is listed at the end of this consent page.

Your participation in this research is voluntary. You are also free to withdraw from this study at any time. In the event new information becomes available that may affect the risks or benefits associated with this research study or your willingness to participate in it, you will be notified so that you can make an informed decision whether or not to continue your participation in this study.

For additional information about giving consent or your rights as a participant in this study, please feel free to contact the MTSU Office of Compliance at (615) 494-8918.

Study Title: Undergraduate Psychology Students' Perceptions of Schizophrenia

Purpose of Study: This study will be investigating the knowledge and attitudes of undergraduate psychology students toward mental illness, specifically schizophrenia, with questionnaires. These questionnaires will be used to assess students' knowledge of, views towards, and reactions to people with mental illness, and schizophrenia in particular.

Procedures: After reading this informed consent, if you decide to participate you will check the "Yes" box below indicating your agreement. If you do not wish to participate check the "No" box. This survey will take about 30 minutes to complete. You will complete questionnaires about your demographic information, your knowledge of schizophrenia, and your views toward those with mental illness and schizophrenia in particular. Your responses are anonymous and your name cannot be connected to your responses.

Risks/Benefits: There are no foreseeable risks to the research; simply the inconvenience of the time take to answer the survey questions. The benefit to the participant is the possibility of learning about schizophrenia and mental illness. The benefit to society is the potential to increase knowledge and understanding for the general public, especially college students, about schizophrenia and the symptoms. The benefit to science is that this research may help to increase knowledge of schizophrenia and its symptoms in order

to create interventions and campaigns to decrease the stigma related to schizophrenia and other mental illnesses.
Compensation for Participation: You will receive 1 research credit for participating in the current research.

Withdrawal from Study Participation: Participating in this project is voluntary. Withdrawing from participation at any time during the project will involve no penalty or loss of benefits to which you might otherwise be entitled.

Confidentiality: All efforts, within reason, will be made to keep the personal information in your research record private but total privacy cannot be promised. Your information may be shared with MTSU or the government, such as the Middle Tennessee State University Institutional Review Board, Federal Government Office for Human Research Protections, if you or someone else is in danger or if we are required to do so by law.

Principal Investigator/Contact Information: If you should have any questions about this research study or possible injury, please feel free to contact Shelby Herron at seh6c@mtmail.mtsu.edu or my Faculty Advisor, Dr. David Kelly, at 615-898-2584.

Consent

I have read the above informed consent document and I believe I understand the purpose, benefits, and risks of the study. I freely and voluntarily choose to participate in this study.

By clicking the Yes box below, you are giving your consent to participate in this study.

Yes
No

APPENDIX D

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Aug 15, 2016

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Licensed content author	S. Martin Taylor, Michael J. Dear
Licensed content date	01/01/1981
Type of Use	Thesis/Dissertation
Institution name	Middle Tennessee State University
Title of your work	Undergraduate Psychology Students' Perceptions of Schizophrenia
Publisher of your work	n/a
Expected publication date	Dec 2017
Permissions cost	0.00 USD
Value added tax	0.00 USD
Total	0.00 USD
Requestor Location	Shelby E Herron United States Attn: Shelby E Herron

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APPENDIX E

DEMOGRAPHIC QUESTIONNAIRE

Please choose the most accurate response to the following questions.

1) What is your gender?

    a) Female

    b) Male

    c) Transgender

    d) Other

2) What is your race?

    a) Black/African American

    b) Caucasian/White

    c) Hispanic/Latino

    d) Asian

    e) Native Hawaiian/Pacific Islander

    f) American Indian/Alaskan Native

    g) Other

3) What is your age?

    a) 18-21

    b) 22-25

    c) 26-29

4) What is your marital status?

a) Single/Never Married

b) Married

c) Divorced

d) Separated

e) Widowed

5) How many years of education have you completed?

a) 12 years/graduated high school

b) 13 years/Freshman in undergrad

c) 14 years/Sophomore in undergrad

d) 15 years/Junior in undergrad

e) 16 years/Senior in undergrad

f) 17 years/Super senior in undergrad

g) Other

APPENDIX F

UNDERSTANDING SCHIZOPHRENIA QUIZ

Please choose the answer that best describes your opinion.

1) A common symptom of schizophrenia includes having multiple personalities
   a. True
   b. False

2) A common symptom of schizophrenia includes having periods of feeling manic and periods of feeling depressed
   a. True
   b. False

3) Having false beliefs can be a symptom of schizophrenia
   a. True
   b. False

4) There must be a disturbance in a person's level of functioning for 1 year to be diagnosed with schizophrenia
   a. True
   b. False

5) Fortunately, taking antipsychotic drugs for 1-2 years usually cures schizophrenia
   a. True
   b. False

6) A person must have either false beliefs or hallucinations to be diagnosed with schizophrenia
   a. True
   b. False

7) Someone with schizophrenia may experience hearing voices
   a. True
   b. False

8) Someone with schizophrenia has panic attacks
   a. True
   b. False

9) The chance of developing schizophrenia during the course of a person's life is common
   a. True
   b. False

10) Individuals with schizophrenia usually have higher than average intelligence
   a. True
   b. False

11) Kids are most likely to develop schizophrenia
   a. True
   b. False

12) Over 60% of homeless people are schizophrenic
   a. True
   b. False

13) Touch, taste, and smell can all be affected by symptoms of schizophrenia
   a. True
   b. False

14) A person's ability to think logically may be affected by symptoms of schizophrenia
   a. True
   b. False

15) In recent years, a blood test has been developed to detect schizophrenia with 95% accuracy
   a. True
   b. False

16) Someone with schizophrenia might be excessively paranoid
   a. True
   b. False

17) Some people with schizophrenia believe that they have special powers
   a. True
   b. False

18) Anyone can develop schizophrenia- it is completely random who has the disorder
   a. True
   b. False

19) One positive thing about schizophrenia is that suicide is rare among these individuals
    a. True
    b. False

20) A person with schizophrenia may see things that are not actually there
    a. True
    b. False