2011

Public Opinions of Schizophrenia

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SENIOR THESIS APPROVAL

This Honors thesis entitled

"Public Opinions of Schizophrenia"

written by

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and submitted in partial fulfillment of the
requirements for completion of the
Carl Goodson Honors Program
meets the criteria for acceptance
and has been approved by the undersigned readers.

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April 20, 2011

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Honors Thesis, Spring 2011

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Schizophrenia is a psychotic disorder characterized by disturbances in thought, behavior, and communication that last longer than 6 months (American Psychiatric Association, 2000). The symptoms of schizophrenia are often so severe that the individual is unable to function normally in society. The resulting erratic behavior, combined with misinformation about the disorder in general, leads to the negative stigma now associated with the disorder. The research presented here evaluates public stigmatization towards schizophrenics; it also explores the similarities between behavior due to racial stereotyping and behavior based on stigmatization of schizophrenics.

Schizophrenia

Onset of schizophrenia usually occurs between ages seventeen to twenty-five; it can occasionally be earlier (childhood schizophrenia) or later in life (late-onset schizophrenia) but such conditions are rare (Torrey, 2006). Typically symptoms can be divided into two categories: positive and negative. Positive symptoms are behaviors or thoughts that are present in schizophrenics but would usually be absent in healthy individuals, such as delusions (believing things that are not real), hallucinations (seeing or hearing something that is not real), and disorganized thoughts or behaviors. Negative symptoms, on the other hand, are characteristics that are usually present in healthy individuals that are not present in schizophrenics; they consist of severe apathy, blunted affect, inattention, and anhedonia (unable to enjoy things one did previously) (Torrey, 2006).

Scientists of the early twentieth century relied strictly on perceptual symptoms to diagnose and treat psychotic patients. No environmental or biological factors were considered; in fact, if the source of the disease appeared to be from a brain injury, the patient was no longer considered to have a psychological disorder (Walker & Tessner, 2008). Emil Kraepelin, one of the first to study schizophrenia in depth, believed that schizophrenic patients were actually suffering from premature dementia (and so named it *dementia praecox*) (Jobe & Harrow, 2010). He believed that the disorder progressively worsened over time with decreased functioning both cognitively and socially. Eugen Bleuler, a psychologist during the early twentieth century, held a different perspective. Although he knew some symptoms were chronic, Bleuler believed that others symptoms decreased in intensity (Jobe & Harrow, 2010). He renamed the disorder schizophrenia because a primary symptom is the decrease in cognitive functioning (*schizophrenia*: a splitting of the mind). With the progression of science came advances in psychology in both research and treatment of psychiatric disorders. Early brain research was only conducted post-mortem and did not significantly assist in the concept of schizophrenia as a disorder (Walker & Tessner, 2008). Real progress was not made in studying and treating the disorder until the late twentieth century when environmental and neurological (brain abnormalities) causes were considered in diagnosing.

Brain chemistry, specifically a dysregulation of the neurotransmitter dopamine, is a primary characteristic of schizophrenia. Several areas of the brain are affected by this imbalance, causing alterations in their shape and function. Recent research suggests that hyperactivity in the hippocampus (part of the limbic system involved in memory) causes the imbalance of dopamine (Grace, 2010). The primary treatment for controlling positive

schizophrenic symptoms is pharmaceuticals to block dopamine receptors; unfortunately dopamine regulation has strong, negative side effects (weight gain, lower life expectancy, involuntary body movements, etc.; Grace, 2010). Presenting new treatment options, Grace's research suggests that normalizing function in the hippocampus and decreasing psychological stress may be noninvasive ways to decrease the dopamine imbalance, therefore decreasing schizophrenic symptoms. Witthaus et al (2010) demonstrated that individuals who have a high-risk for developing schizophrenia have smaller hippocampus as well as a smaller amygdala (nuclei within temporal lobe that are involved in processing and remembering emotional reactions). As well as confirming the hippocampus' role in schizophrenia, Witthaus et al.'s discovery of the reduced amygdala elucidates why schizophrenic patients have more trouble understanding and communicating their emotions.

Another principal characteristic of the schizophrenic brain is structural and functional changes in cortex, specifically reduced grey matter in the medial-temporal, superior temporal, and prefrontal areas (Conklin & Iacono, 2002; Karlsgodt, Sun, & Cannon, 2010). These changes in brain volume affect episodic memory, processing auditory information, and short-term memory and decision-making. Researchers have discovered that these variations are present in high-risk patients (those with genetic or biological precursors) as well as first-episode schizophrenics (Karlsgodt, Sun, & Cannon, 2010), implying that it could be contributing to onset of schizophrenia as opposed to a byproduct of the disorder. Conklin and Iacono (2002) determined that changes in the temporal lobe result in positive psychiatric symptoms while alterations in the frontal lobe produce negative symptoms; both cause impairment in attention, language, and memory. Another research team determined that brain volume was reduced in

early onset schizophrenia spectrum disorders (EOSS) when compared to early onset mood disorders (EOMD) (El-Sayed et al, 2010). Researchers also found large deficits of grey matter in the EOSS patient, showing that reduced grey matter is specific to schizophrenia, which could be helpful in diagnosis and early determination of potential patients. Apart from brain abnormalities, there are a variety of factors (both environmental and genetic) that play a role in the development of schizophrenia. With advances in scientific technology, much current research focuses on the genetic and prenatal factors.

While there are many genes that are involved in the development of schizophrenia, no single gene or even subunit of genes are clear prerequisites for the disorder (Conklin & Iacono, 2010; Cromwell, 1993; Pogue-Geile & Yokley, 2010; Walker, Shapiro, Esterberg, & Trotman, 2010). As observed by Walker, Shapiro, Esterberg, and Trotman (2010), any altered genes found in schizophrenic patients are usually involved in the development of the nervous system; these mutations can occur spontaneously or though inheritance. Another complication to genetic diagnosing is that the same genes or genetic mutations appear in several different psychological disorders (Pogue-Geile & Yokley, 2010). Since researchers still lacks a significant correlation between a gene or gene subunit and a single disorder, it is impossible to qualify a specific gene to a particular mental illness.

Given that vulnerability to schizophrenia cannot be defined genetically, researchers have been looking to prenatal factors to determine risk. Fetal development is one of the most significant times for epigenetic development (genetic changes that impacts the behavioral and biological phenotype); epigenetic changes would explain the brain abnormalities in schizophrenic patients (Walker et al., 2010). However these brain changes are not detectable

until the physiological changes of adolescence begin, which explains why schizophrenic symptoms (including functional decline) arise in the later teenage years (Walker et al., 2010). While environmental factors contribute to recovery of a diagnosed patient, Cromwell (1993) discovered that being raised by someone with schizophrenia does not increase the individual's chances of developing the disorder.

Despite many changes in personality and behavior, a person with schizophrenia feels the same emotions as the average person. While they may sincerely experience emotions, schizophrenic people are less likely to exhibit them on a visible level (Kring & Caponigro, 2010; Torrey, 2006). They also cannot imagine the emotions tied to future events and so are less likely to desire certain events or outcomes (Kring & Caponigro, 2010); this behavior is probably encouraged by their lack of desire for goal related activities (Conklin & Iacono, 2002). In spite of these differences, people with schizophrenia understand the stigmas associated with their disorder and feel the emotional repercussions. Neurological researchers have found that self-stigma, the "internalized cognitive, emotional, and behavioral impact of others' negative attitudes," increases the psychological distress already being experience by chronically ill patients (Rao et al, 2009).

Hatzenburhler, Nolen-Hoeksema, and Dovidoio's (2009) recent study on emotional regulation gives some insight to the mechanisms used to manage the psychological stress from stigmatization. Three main strategies are used to cope: rumination, suppression, and social support. Rumination is to ponder or mediate on the stressful event or situation frequently; unfortunately rumination increases psychological stress of the stigmatized individual (Nolen-

Hoeksema, Wisco, & Lyubomirshy, 2008). Suppression is simply denying or inhibiting emotional behaviors; researchers have found that it is generally motivated by fear of judgment or exclusion (Hatzenburhler, Nolen-Hoeksema, & Dovidoio, 2009). Social support, on the other hand, is a positive effect of stigmatization; feeling excluded or judged by others causes those with similar traits to form a community of their own (Hatzenburhler, Nolen-Hoeksema, & Dovidoio, 2009).

Thanks to antipsychotic medications, there is a good chance of recovery from positive psychiatric symptoms but the high relapse rates and low functional recovery illustrate that the untreated negative symptoms prevent schizophrenic patients from successfully adjusting to "normal" life (Geyer, 2010). Re-acclimating to social settings and battling stigmatization are the most difficult problems facing recovering schizophrenics. Walker and Tessner (2008) believe that patients experience such a distortion of reality that it compromises their basic ability to function. For example, resonance, mirroring another person unconsciously, is important in empathy and shared emotions (i.e. contagiously laughter or yawning) as it allows you to unconsciously relate to and communicate with another person. Haker and Rössler (2009) discovered that schizophrenic patients lack social resonance, decreasing their social compatibility. These impairments prevent people with schizophrenia from a range of opportunities, from everyday tasks such as working to functional milestones such as living independently (Harvey, 2010).

One method of combating these problems is through psychosocial interventions. These interventions focus on the impact of the disorder on the person as opposed to physiological

aspect and lower psychological stress. The five main groups of intervention strategies include Cognitive Behavioral Therapy (CBT), which tries to evaluate the symptoms in light of the patient's genes and early learning experiences; Social Skills Training (SST), which teaches schizophrenic patients social perception and cognition and appropriate behavioral response; family interventions, which focus on supporting both the patient and their family to minimize psychological distress; supported employment, which provides patient with a job and teaches them social and economic skills will they are working; finally cognitive remediation, can either train people to improve specific abilities or trains them to compensate (Addison, Piskulic, & Marshall, 2010). Confirming the importance of social intervention programs, a twenty-five year study from the World Health Organization (WHO) found that early interventions focusing on both social and pharmaceutical treatments held the great long-term benefits (Harrison et al, 2001).

Researchers have observed that outcomes for patients with schizophrenia are poorer than with any other psychological disorder. Torrey's (2006) work determined some potential causes of early death in schizophrenia (accidents, diseases, unhealthy lifestyle, inadequate medical care, and homelessness) and other researchers have found some specific symptoms associated with poorer recovery (i.e. poor work/social adjustments, no depressive symptoms, no guilt/confession, etc.) (Jobe & Harrow, 2010). One of the more extreme effects of such negative recovery is that the lifespan of people with schizophrenia is decreased by a least a decade (Harrison et al, 2001; Torrey, 2006).

Stigmatization

Hardly a new problem, stigma has a variety of definitions, depending on the discipline and focus of the researcher; for the purpose of this study, it is "an attribute that is deeply discrediting and reduces the bearer from a whole and unusual person to tainted and discounted one" (Goffman, 1963, p. 3). Essentially it is making assumptions about a person based on the negative stereotype you hold of them as opposed to judging them as an individual. Researchers have demonstrated that stigmas are prevalent with general populace because they are social (represent collectively agreed upon view of a group of people) and efficient (allow one to immediately create an opinion of someone based on the group they belong to). (Corrigan et al, 2001). Link and Phelan (2001), two leading stigma researchers, evaluate stigma based on the co-occurrence of its components (labeling, stereotyping, separation, status loss, and discrimination); they also believe that for stigmatization to occur, one group must exercise power over another.

According to Link and Phelan (2001), there are four levels to stigmatization: labeling (selection and labeling or naming of social characteristics), stereotyping (label is linked to undesirable characteristics), separating (social labels separate "us" from "them"; if separation is thorough, stigmatized people may believe they are different) and emotional reactions (reactions to stigmatization or to the stigmatized group). People who are stigmatized against also feel status loss and discrimination. Jones et al. (1984) discovered that the stigma experienced can be greater or worse depending on the how well the trait can be hidden, if it is permanent or short-term, the degree to which the attribute alters or interrupts daily life, how

much the condition upsets senses, how the individual acquired the trait, and the perceived dangerousness of the trait.

The psychological stress from stigmatization can affect a schizophrenic person's mental health as well as emotional well-being. Hooley's (2010) research on the socioenviromental factors (e.g. social functioning, family stress) of schizophrenia demonstrates that stigmatization amplifies the tension felt in the patients' home or personal life and increases risk of relapse. Not only does negative stereotyping have strong psychological effects, it impacts daily living for the stigmatized person. For example, because people who are labeled "mentally ill" are perceived as dangerous, less stable, and socially awkward, they are less likely to be hired (Bordieri & Drehmer, 1986), to be leased apartments (Page, 1995), or to be interacted with socially (Corrigan et al, 2001). As previously discussed, the main way for stigmatized groups to deal with this stress is through emotional regulation, specifically through rumination, suppression, and social support (Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009; Nolen-Hoeksema, Larson, & Grayson, 1999).

Stigmatization of schizophrenic patients, and the mentally ill in general, has become such a detriment to their recovery that more research has been focused on finding out what influences these stereotypes. In fact, the 'WPA Global Programme against Stigma and Discrimination Because of Schizophrenia' was formed to help determine and alleviate some of these stereotypes. Kadri and Sartorious (2005), associates of the WPA Global Programme, have found several ways that social stereotypes have been an obstacle to people with schizophrenia and their families; for instance, many families either lack the funds or resources to regularly

work with a psychologist and often those who could refuse to seek treatment due to the social repercussions.

Another challenge found by Kadri and Sartorious (2005) is unemployment. As the job market becomes more competitive (for example, common jobs requiring higher education), it is increasingly difficult for schizophrenic people to gain employment. Due to the extreme portrayal of schizophrenic symptoms in the media, the general public often views people with schizophrenia as unstable and even frightening. This miscommunication causes people who have schizophrenia to be isolated and have poorer quality of care (Kadri & Sartorious, 2005). This theme of perceived dangerousness is strongly associated with stigmas of schizophrenia and even seems to drive the discrimination (Penn et al, 1999; Steadman, 1981).

One key to reducing schizophrenic stigma would be to identify what factors influence the public's fear and try to rectify the misinformation. Their fear is not completely unfounded: there are studies that show people with severe mental disorders are more likely to be dangerous than others (Swanson et al, 1991.) However, considering how rare severe mental disorders are, the violence committed by those with these disorders accounts for a minuscule portion of the crime. People's fear of those with mental illness is excessively disproportionate to reality and this fear is furthered by the media's portrayal to the general public. By over-exaggerating the dangerousness of the disorders and the criminals who generally have them, the media only makes life harder for those individuals who are schizophrenic (Penn et al, 1999).

Stuart and Arboleda-Flôrez (2001) assessed general opinions about schizophrenia and people who have the disorder; most participants had a basic knowledge of what schizophrenia is and the general symptoms associated with it. However, there were clear differences in the

stereotypes held by different age and knowledge groups. Older participants with less knowledge held the strongest stereotypes about schizophrenia; this distinction lessened as the age of the volunteer decreased. The greater knowledge a person had about mental disorders was also correlated with less stigmatization no matter what their age.

In order to better learn how to mediate or change public stigmas of schizophrenia, researchers have been investigating what influences public perceptions of psychotic patients. A study by Martin, Pescosolido, and Tuch (2000) found five main components that shape attitudes towards the mentally ill. These factors include the nature and causes of their behavior, the perceived danger of patient, the label "mental illness", and the sociodemographics of the respondent. These factors seem centered around a lack of knowledge about mental disorders. It was thought, therefore, that a greater knowledge of mental disorders would improve public opinion and alleviate at least part of these stigmas.

Current research, however, actually shows that greater knowledge of schizophrenia does not improve stereotypes. During a decade long study, Angermeyer and Matschinger (2005) found that though biological factors were more accepted as the primary causes behind schizophrenia, greater social distance was desired; this somewhat discouragingly disproved the theory that attributing the causes of schizophrenia to something outside the individual's control did not reduce stigma. In fact, another study found that while knowledge about disorders has increased substantially, the stereotype of the mentally ill being dangerous has increased with it (Phelan et al, 2000). One explanation for this surprising reaction may be that the more biological causes were portrayed, the less self-control and more unpredictable the person appeared and so caused more fear in the participants.

Further proof that increased knowledge does not automatically improve stigmas was found by Nordt, Rossley, and Lauber (2006) evaluating the attitudes of mental health professionals towards the mentally ill. Surprisingly, they found that while mental health professionals were less in favor of legal restrictions (e.g. supervised driving) being placed on schizophrenic patient, they held equally negative stereotypes about schizophrenia as the general public. If sharing the symptoms of schizophrenia only increases public fear and social distance, it might be more effective to contextualize the facts they already know (instead of discussing hallucinations and delusions, talk about how medications are able to control these symptoms so they no longer effect schizophrenic patients; Penn et al, 1999).

Labeling is another strong determinate of stigmatization. In fact, research illustrates that labeling people as "schizophrenic" (as opposed to just describing their symptoms) negatively impacted participant's view of them (Angermeyer & Matschinger, 2003; Link, 1987; Page, 1995). This confirms that, despite efforts to better inform the public of mental disorders, negative stereotypes are still strongly held about disorders such as schizophrenia. Angermeyer & Matschinger (2003) also confirmed that emphasizing dangerous stigmas of the disorder negatively impacted participants' emotional reaction (producing fear or anger) while presenting a schizophrenic person in need of help only evoked mixed feelings within the participants. Thankfully these stigmas are not unchangeable. In fact, a creative study by Schulze, Richter-Werling, Matschinger, and Angermeyer (2003) examined how interacting with a schizophrenic patient changed students' perception of the disorder and the people who had it (illustrated again in Holmes et al 1999 study). Students who interacted with a patient had less negative stereotypes of schizophrenia; a positive trend in social distance was also observed. These

results were still present in a month later in a follow-up study, illustrating that these changes in the stigma can have positive long-term effects.

Racism

The study of stigmatization towards the mentally ill is a relatively a new field when compared with racial discrimination. Racism, defined in this study as prejudice based on ethnicity, is closely related to social exclusion and discrimination (Rodriguez et al, 2009). Essentially, racism is making assumptions about a person based on the stereotype held of them as opposed to judging them as an individual. Racism is a social construct- not a biological one. There are no genetic links or biological features of a person that explains racist behavior (Smedley, 2007) and so it must be studied and rectified within a social setting.

The history of racism extends throughout ancient times but it was not until the 19th century that people realized it was a problem within society. Interestingly, it was not the owning of slaves that began racism issues in the United States (Morgan, 1975). While indentured slaves were brought over to work the tobacco fields for the Jamestown colony, race was irrelevant. In fact, Anthony Johnson, a famous, wealthy African American colonizer, owned rights to African, European, and Indian slaves; he and his family had the same rights and privileges as other European landowners (able to vote, served on juries, etc) (Morgan, 1975). During the 17th century, prejudice was based strictly on social class; race was completely irrelevant (Morgan, 1975). It was during the social upheaval of the late 17th and early 18th centuries that race became the factor that separated groups. By now, slaves were being brought directly from Africa and were unfamiliar with European customs and religion. Their "uneducated" behavior and foreign beliefs caused Europeans to see them as "savages" and

lead to the denial of their European rights that continued in the United States until the Civil War (Smedley, 2007). Despite the official end of slavery during the 1860s, racism and the stereotypes associated with different races was and continues to be a determinate of social status and identity in society.

Jones (2000) presents three distinct facets of racism: institutionalized, personally-mediated, and internalized. Institutionalized racism is differential access to society because of race, including housing, education, or employment. Perhaps the most important characteristic of racism, institutionalized stigmatization has been part of our culture for so long that the structure of society perpetuates this cycle (children are raised in the same underprivileged environments that their parents' experienced, lacking the same opportunities, etc). Jones (2000) feels that this aspect of racism must be changed before significant progress towards equality is made. Personally-mediated racism is the typical form of racism, defined as judging a person (prejudice) and treating them differently (discrimination) based on their appearance. The well-researched effects of prejudice and discrimination include dehumanization, suspicion, mistreatment, and more. Finally, internalized racism is experienced by those who are stigmatized against; it describes negative feelings towards members of one's own group and oneself, including the belief of being of worth less than those in other groups. One study found that racism can be so prevalent that even children are able to sense the discrimination (Bernstien, Szlacha, & Coll, 2010). When asked about racism in their schools and homes, the children were able to determine which teachers favored students of the same skin and whether or not they were all being treated equally. This feeling of isolation and worthlessness often causes discriminated groups to band together, strengthening each other against the

stigmatization of the outside world. Interestingly these same traits of internalized racism can be found in patients of mental disorders. Mentally ill people, through organizations such as the Icarus Project, are able to freely share their thoughts and emotions in a safe and supportive environment- an experience they may not have in their personal lives (The Icarus Project).

Just like stigmatization of schizophrenic patients, racism has severe, detrimental effects on the "out-group." African Americans are more likely to contract diseases, live in poorer health conditions, and have lower income (Williams, 1999). Even when SES is controlled for, African Americans still live in poorer neighborhoods and have worse medical care; these racial discrepancies could be accounted for by the psychological stress of stigmatization. Another study found that the social isolation caused by discrimination increased mortality rates among African Americans (Collins & William, 1999). Isolation and mortality was also correlated for both African Americans and Caucasians in cities where racial distinctions were more pronounced.

Since racism is still such an issue for modern Americans, tools for decreasing racist thoughts and behaviors are essential, particularly in schools or other areas that impact younger people. More than the knowledge that racist behavior is bad, Pollack (2007) suggests that students need to be shown specific examples of how it harms and ways to change their behavior. Converting racism from a static, abstract notion to a personal opinion within each individual's control should help decrease racist stigmatization by forcing people to be responsible for their own thoughts and actions.

Racism can differ depending on the culture and setting. For example, in Van Dijk's book *Communicating Racism: Ethnic Prejudice in Thought and Talk* (1987), he discovered differences between the discrimination experienced in California and in Amsterdam; both cities display

racist behaviors- they just present differently in the different cultures. Just as different cultures have different forms of racism, racial stereotypes do not present themselves today as they did thirty years ago. Traditional racism, or blatant racism, is directly racist and is considered socially inappropriate in most societies. An emerging form racism, however, is subtle racism; it is indirect and distant. It does not involve any sort of public declaration of dislike or discontent with another group but instead is discriminatory behavior and thoughts. Meertens and Pettigrew's (1997) scale that incorporates both types of racism: blatant racism includes items about formal and intimate rejection as well as threat while the subtle scales focus on differences in values and beliefs and cultures.

Countless studies have evaluated the strong correlation between stereotypes and racism; research also demonstrates that people judge those with schizophrenia based on public stigmas of them. The present study aims to show that public stereotypes of schizophrenia are associated with racist-like behavior. In this study, a social distance scale (created by Link et al., 1999) is combined with two vignettes (Link et al., 1999) to evaluate the degree to which participants wish to remove or exclude an individual with schizophrenia. Social distance scales, assessing the extent to which an individual or group is removed or excluded from your life, are the most common method of determining an individual's degree of stigmatization. Since most people are not aware of the specifics of mental disorders (schizophrenia in this case), vignettes are an effective way to give participants the information needed to compare people with mental disorders to "average" people. A racism scale (modified to focus on schizophrenia as opposed to race; Meertens & Pettigrew, 1997) is included to evaluate the participant's racist-like behavior towards schizophrenics. This scale assesses both blatant and subtle stigmatizing

behavior in a variety of areas, including how much schizophrenics differ in their beliefs and practices, if they deserve these jobs, etc. This study theorizes that a participant's desire for social distance can be used to predict their racist-like behavior, with greater social distance anticipating more racist-like behavior.

Method

Participants. Undergraduate students were recruited from a variety of classes and most were compensated for their time by receiving extra credit. An online link to this study was also posted through email and Facebook. A total of 277 participants (99 males, 178 females) with an approximate mean age of 32 completed the questionnaire. Recruiting speeches for both in class and online can be found in Appendix A and Informed Consent can be found in Appendix B.

Measures. *Vignettes*. Two vignettes (Appendix C) were used in this research to describe the person being evaluated by the participant. The first vignette described schizophrenia (includes the label "schizophrenic") (Link et al, 1999); it describes the symptoms according to American Psychiatric Association (2000) and has been used in numerous studies with success. The 'troubled person' vignette, also from previous research, acts as a control for discrimination and as a baseline for determining results (Link et al, 1999).

Social distance scale. The social distance scale (Link et al., 1999; Appendix C) is a six-item scale that evaluates the social distance desired from the person described in the vignette. It is rated on a scale of 1 (definitely willing) to 4 (definitely unwilling) and includes items such as "How willing would you be to move in next door to this person?" Higher scores represent greater social distance. Cronbach's alpha is .87, which is within the recommend range of

($0.75<\alpha<0.90$) according to Link, Hang, Phelan, and Collins (2004). The scale has been used in several other studies; for example, Martin, Pescolido, and Tuch (2000) administered the scale during their research on public attitudes towards mental illness.

Subtle racism scale. Created by Meertens & Pettigrew (1997), this nineteen-item scale measures both overt and subtle racism (Appendix D). It includes five subscales: Threat and Rejection (formal threat or rejection of out–group (different race or, in this study, schizophrenics), Intimacy (willingness to form close relationships with out-group), Traditional Values (believe out-group should conform to traditional values), Cultural Difference (believe out-group is different culturally), and Affective Prejudice (admiration or sympathy towards the out-group). The alpha for the original blatant (.90) and the subtle (.77) scales were within the acceptable range; the alpha for the modified scale was .56, below the optimum range but above the minimum requirement. The scale was originally developed to research subtle racism in Europe and has been modified for use in this study to focus on mental disorders instead of race. In the original scale, the first question read, "West Indians have jobs that the British should have" (rated 1-strongly disagree to 7-strongly agree); the first question of the modified scale used in this study was "People with schizophrenia have jobs that the average person should have," rated on the same Likert scale. .

Demographic Questionnaire. A demographic questionnaire (Appendix E) was also used to learn gender, age, and interactions with mentally ill persons.

Procedure. Using a link provided to them, participants followed the directions on the website hosting the study. Before beginning, they gave informed consent (Appendix B). Participation consisted of completing all questions online and took between 10-15 minutes. At

the end of the study, the participants were debriefed and contact information was given to address any questions or concerns (Appendix F).

Results

Preliminary analysis:

Initial correlations were conducted to establish relationships between the variables; all results can be found in Table 1. A Pearson correlation computed the relationship between racism and social distance desired from people with schizophrenia, revealing that social distance was slightly but significantly, positively correlated with racist-like behavior, showing that the more social distance was desired by the participant, the most racist-like behaviors they displayed. Further analysis showed the blatant subscale to be significantly, moderately, positively correlated with schizophrenic social distance, illustrating that the more social distance desired, the greater their blatant racist-like behavior; the subtle subscale showed no significant relationship. Finally, each subscale was broken into its component groups; the intimacy component of the blatant scale and the cultural and affective prejudice components of the subtle scale were significantly correlated with social distance.

Partial correlations were used to explore the relationship between racist behavior and social distance desired from schizophrenic people when controlling for social distance desired from the "troubled person" (Table 2). There remained significant, positive correlations between social distance from schizophrenics and total and blatant racist-like behavior; the intimacy, cultural differences, and affective prejudice components of the subscales also produced significant correlations, showing that increased social distance implies less desire fro intimidate

relationships, fewer perceived cultural differences, and more sympathy with schizophrenic people. When age and experience with mental disorders was controlled, social distance was still significantly related to total racism and blatant racism (Table 3 and 4); more social distance, again, demonstrated increase in racist-like behaviors, both general and blatant.

Finally t-tests were computed to confirm that there was a difference between total social distance desired from schizophrenic patients ($t= 81.82$, $p<.001$) and total social distance from the troubled man ($t= 60.94$, $p<.001$). All analyses were significant, demonstrating a significant difference in the mean social distance wanted from schizophrenics and the social distance wanted from the "troubled" man.

Regression Analysis

A series of hierarchical regression analyses were conducted to determine if desired social distance from schizophrenic people predicted racist behavior while controlling for various factors. Correlations between the variables were explored to check for multicollinearity; VIF and TOL were also examined and all were within the acceptable range.

Initially, hierarchical regressions were conducted to determine if desired social distance from schizophrenic people predicted racist-like behavior while controlling for social distance desired from the "troubled person." Social distance desired from the "troubled person" again acted as a control to ensure the racist-like behavior is only compared to social distance from schizophrenics. Significant models were found for general racist-like behavior as well as blatant racism but subtle racist behavior was not predicted by social distance (Table 5). These results illustrate that the amount of social distance desired can be used to predict racist-like behavior (particularly blatantly racist behavior) towards schizophrenics.

Hierarchical regressions were also conducted on each component of the racism scale (threat/rejection, intimacy, traditional values, cultural differences, and affective prejudice). Significant relationships were produced for intimacy (greater social distance predicted less intimate relationships), cultural differences (believe there are less differences culturally), and affective prejudice (more sympathy with schizophrenics). However, issues with multicollinearity significantly affected cultural differences and affective prejudice; the data is not presented here and requires further research before any appropriate conclusions can be drawn.

Hierarchical regressions again were computed using social distance from schizophrenia to predict racism while controlling for age, disorder history, and social distance from "troubled" person (Table 6). Both age and disorder history have been shown in previous research to have a significant impact on the social distance held (Link, et al., 2004; Martin, Pescosolido, & Tuch, 2000; Walker & Tessner, 2008) and so it was important to control for any potential baseline differences. Again significant relationships were found with general and blatant racist-like behavior, demonstrating that even when age, interactions with mentally ill people, and general social distance is controlled, people who want greater social distance from schizophrenics are also more likely in engage in racist-like behavior. As shown in previous studies, age was also found to be a significant predictor in all three cases.

Finally the data was split to compare participants who had experience with mental disorders to those who did not. Hierarchical regressions (controlling for age and social distance from the "troubled" person) were computed using social distance from schizophrenics to predict blatant racist behavior (Table 7). Interestingly social distance from schizophrenic patients was the only significant predictor of racist-like behavior in participants who had

previous experiences with mental disorders but racist behavior in people without experience was significantly predicted by both age and social distance.

Discussion

The present study, evaluating the relationship between social distance and racist-like behavior towards schizophrenics, found statistical evidence that those who desire greater distance from schizophrenics socially are more likely to display racist-like behavior. Though no relationship with subtle racism was found, blatant (especially intimate) racist behaviors were significantly predicted by social distance. Interestingly, people seem willing to acknowledge that those with schizophrenia are effectively similar in their beliefs and cultural behaviors (tested by the subtle scale) but still feel formal distance from and do not want intimate relations with schizophrenic people (blatant scale). Advocates should focus on public acceptance of people with schizophrenia and correcting the misinformation given by the media since, as shown by this study, people do not feel that there are differences in cultural beliefs and behavior and sharing more information about the disorder has already proven to be ineffective (Phelan et al., 2000).

Experience with the mentally ill has been shown as an effective mediator for prejudice and the results in this study agree that people display different racist behaviors depending on their experience, if any, with mental disorders. It is especially interesting that age predicted racism in people who lack experience but was not a significant predictor when the participant had interacted with a mentally ill person; no matter what their age, interacting with mentally ill people seems to convince people that they are no different or scarier than the average person and lessens the degree of social separation they feel necessary. These differences continue to

highlight that in order to effectively alter the stigmas of schizophrenia and other mental disorders, different age and experience groups need to be targeted separately.

The most significant issue in this study is the alpha level of the scale; while above the required minimum, having a low reliability implies that the results could be skewed. Currently there are no scales investigating the intersection of mental illness and racism so while adapting a scale is never ideal, in this case is was necessary to gather the data. More research should be conducted to insure the scales reliability and the test's results. Another issue was the amount of the variance explained. While almost all results were statistically significant, not a lot of practical difference was explained. This may have been due to the sample size or the participants (over half were college student from a small, Christian university). However the results were statistical significant, demonstrating there is a relationship which could be strengthened by using a larger, more diverse set of participants. Another limitation to this study was when asking the participants in they had experience with someone with a mental disorder; if instead participants had been asked if they knew someone with schizophrenia, the researcher could have looked at the effects of knowing someone with schizophrenia on stigmatization as opposed to mental disorders in general.

The fact that half the participants are students at a Christian campus presents an interesting facet for future study. Religiosity can have powerful effects on an individual's perspective towards others but researchers have already found that religion is not related to racial stigmatization (Duriez & Hutsebaut, 2000). It would be interesting to explore if the relationship exists between religion and stigmatization of the mentally ill (as opposed to race) and to determine if there is variance based on religion.

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To effectively fight stigmatization of any mental disorder, researchers need to explore in detail how different types of racism generate different behaviors. Determining the causes of stigmatizing behaviors will best educate psychologists and advocates on the most effective ways to fight stereotyping. This study shows that social distance is able to significantly predict stigmatization of schizophrenics; it also demonstrates how important experience with the mentally ill can be to changing stereotypes. It would be wise of researchers to focus on ways to increase interactions between the public and the mentally ill, like Schulze et al.'s school project (2003), and to consider focusing anti-stigma programs to target specific ways to decrease social distance. Unfortunately, prejudice and stigma create a loop that is difficult to escape. People feel social pressure to distance themselves from individuals with schizophrenia because of the stigma associated with it and until this stigma is reversed, this social distance will continue along with the blatant racism that accompanies it.

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Table 1

Summary of Intercorrelations for scores on the Social Distance and Racist-like Behavior Scales

Measure	1	2	3	4	5	6	7	8	9
1. Social distance from schizophrenic	—	.23**	.40**	-.08	.06	.53**	.08	-.18**	-.22**
2. Total racist-like behavior score	.23**	—	.82**	.71**	.68**	.48**	.68**	.11	.03
3. Blatant	.40**	.82**	—	.20**	.75**	.68**	.44**	-.30**	-.16**
4. Subtle	-.08	.71**	.20**	—	.31**	-.03	.67**	.48**	.24**
5. Threat/rejection	.06	.68**	.75**	.31**	—	.03	.51**	-.23**	-.20**
6. Intimacy	.53**	.48**	.68**	-.03	.03	—	.10	-.21**	-.03
7. Traditional values	.08	.68**	.44**	.67**	.51**	.10	—	-.24**	-.12
8. Cultural differences	-.18**	.11	-.30**	.48**	-.23**	-.21**	-.24**	—	.10
9. Affective prejudice	-.22**	.03	-.16**	.24**	-.20**	-.03	.12	.10	—

Note: *p<.05, **p<.01, ***p<.001

Table 2

Summary of Partial Correlations while controlling for social distance from "troubled" person

Measure	1	2	3	4	5	6	7	8	9
1. Social distance from schizophrenic	—	.22***	.36***	-.05	.08	.46***	.08	-.12*	-.20**
2. Total racist-like behavior score	.22***	—	.82***	.72***	.69***	.48***	.68***	.13*	.04
3. Blatant	.36***	.82***	—	.22***	.77***	.67***	.44***	-.28***	-.15*
4. Subtle	-.05	.72***	.22***	—	.31***	-.02	.67***	.47***	.24***
5. Threat/rejection	.08	.67***	.77***	.31***	—	.04	.51***	-.23	-.20**
6. Intimacy	.46***	.48***	.67***	-.02	.04	—	.10	-.17**	-.01
7. Traditional values	.79	.68***	.44***	.67***	.51***	.10	—	.24***	-.11
8. Cultural differences	-.12*	.13*	-.28***	.47***	-.23***	-.17**	-.24***	—	.09
9. Affective prejudice	-.20**	.04	-.15*	.24***	-.20**	-.01	-.11	.09	—
N	274	274	274	274	274	274	274	274	274

Note: *p<.05, **p<.01, ***p<.001

Table 3

Summary of Partial Correlations while controlling for disorder history

Measure	1	2	3	4
1. Social distance from schizophrenic	---	.23***	.39***	-.08
2. Total racist-like behavior score	.23***	---	.82***	.71***
3. Blatant	.39***	.82***	---	.20**
4. Subtle	-.08	.71***	.20**	---
N	272	272	272	272

Note: ***p<.001; **p<.01

Table 4

Summary of Partial Correlations while controlling for disorder age

Measure	1	2	3	4
1. Social distance from schizophrenic	---	.26***	.41***	-.05
2. Total racist-like behavior score	.26***	---	.82***	.70***
3. Blatant	.41***	.82***	---	.19**
4. Subtle	-.05	.70***	.19**	---
N	273	273	273	273

Note: ***p<.001; **p<.01

Table 5

Hierarchical Regression Predicting Racist-like Behavior from Social distance from schizophrenia and Social distance from "Trouble" person

	Racist-like Behavior Scores							
	Total		Blatant		Subtle		Intimacy	
Predictor	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1								
SD "Troubled"		.08		.19*		-.07		.30**
Step 2	.05**		.12**		.002		.19**	
SD "Troubled"		-.06		-.03		-.04		.02
SD "Schizophrenia"		.26**		.41**		-.06		.52**
N	277		277		277		277	

Note: SD: social distance; experience with mental disorder; *p<.001; **p<.01

Table 6

Hierarchical Regression Predicting Racist-like Behavior from Social distance from schizophrenia and Social distance from "Trouble" person, age, and disorder history

	Racist-like Behavior Scores					
	Total		Blatant		Subtle	
Predictor	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1						
SD "Troubled"		.11		.21***		-.02
Age		-.19**		-.12		-.24***
D/O History		.03		.05		-.03
Step 2	.05**		.12***		.01	
SD "Troubled"		-.37		-.01		.00
Age		-.20**		-.14*		-.24***
D/O History		.07		.01		-.03
SD "Schizophrenia"		.26***		.42***		-.05
N	274		274		274	

Note: SD: social distance; D/O History: experience with mental disorder; ***p<.001; **p<.01; *p<.05

Table 7

Hierarchical Regression Predicting Blatant Racist-like Behavior separated by experience

	Blatant Racist-like Behavior			
	With experience		Without experience	
Predictor	ΔR^2	β	ΔR^2	β
Step 1				
SD "Troubled"		.15		.25**
Age		.02		-.25**
Step 2	.19***		.18**	
SD "Troubled"		-.07		.06
Age		.00		-.27**
SD "Schizophrenia"		.48***		.33**
N	130		145	

Note: SD: social distance; Experience: experience with mental disorder; ***p<.001; **p<.01; *p<.05

Appendix A

Recruiting Script: Online

My name is Amy Guiomard and I am conducting a study about public opinions of schizophrenia. Participation is open to anyone who is at least 18 years old. You will be required to fill out two online questionnaires, which should take no longer than fifteen minutes to complete. Participation is completely voluntary. If you choose to participate, please click on the link below and follow the directions given. Thank you.

Recruiting Script: Offline (classroom)

My name is Amy Guiomard and I am conducting a study about public opinions of schizophrenia. Participation is open to anyone who is at least 18 years old. You will be required to fill out two online questionnaires, which should take no longer than fifteen minutes to complete. Participation is completely voluntary. If you choose to participate, please write you name and email address on the sign-up sheet. You will receive an email from the investigator; click on the link in the email and follow the directions given. After completing the questionnaire, reply to the email to receive credit for participating. Thank you and are there any questions?

Appendix B

Informed Consent

Project Title: Public Opinions of Schizophrenia

Please read this consent agreement carefully before you decide to participate in the study.

The purpose of the study is to evaluate public opinion of schizophrenia.

What you will do in the study: As a participant in this study, you will spend approximately 15 minutes completing a set of questionnaires.

We have identified no risks to you as a participant in this study.

The information you provide in the study will be handled **confidentially**. There will be no connection between your name and any responses to any part of this study. Your name will not be used in any report.

Your participation in the study is completely voluntary, and you have the right to withdraw from the study at any time.

Your professor(s) may have offered bonus points as incentive for participating in this study. At the conclusion of the study, a list of all participants will be furnished to professors offering such bonus points.

If you have questions or concerns about the study, please contact:

Amy Guiomard
OBU Box 4238
Ouachita Baptist University
Arkadelphia, AR 71998-0001
e-mail: gui43323@obu.edu

Or:

Dr. Guyla Davis
e-mail: davisg@obu.edu

You may contact the following person regarding your rights in this study:

Randall Wight, Chair
Institutional Review Board
OBU Box 3773
410 Ouachita Street
Ouachita Baptist University
Arkadelphia, AR 71998-0001.
Telephone: (870) 245-5107

I have read and understand this document and have had the opportunity to have my questions answered. I attest that I am at least 18 years old. I agree to participate in the research study described above.

Signature: _____ Date: _____

If you agree to participate in the research described above, please hit continue.

Appendix C

Vignettes and Social Distance Scale

Vignette #1:

John is a man with a college education and has been recently diagnosed with schizophrenia. Up until a year ago, life was pretty ok for John. But then things started to change. He thought that people around him were making disapproving comments and talking behind his back. John was convinced that people were spying on him and that they could hear what he was thinking. John lost his drive to participate in his usual work and family activities and retreated to his home, eventually spending most of his day in his room. John was hearing voices even though no one else was around. These voices told him what to do and what to think. He has been living this way for six months.

Please answer the following items regarding the person described above:

1. How willing would you be to move in next door to this person?
   a) Definitely willing
   b) Probably willing
   c) Probably unwilling
   d) Definitely unwilling
2. How willing would you be to become friends with this person?
   a) Definitely willing
   b) Probably willing
   c) Probably unwilling
   d) Definitely unwilling
3. How willing would you be to spend an evening socializing with this person?
   a) Definitely willing
   b) Probably willing
   c) Probably unwilling
   d) Definitely unwilling

4. How willing would you be to start working closely with this person on the job?

   a) Definitely willing

   b) Probably willing

   c) Probably unwilling

   d) Definitely unwilling

5. How willing would you be to have a group home/boarding house for people like this person in your neighborhood?

   a) Definitely willing

   b) Probably willing

   c) Probably unwilling

   d) Definitely unwilling

6. How willing would you be to have this person marry into your family?

   a) Definitely willing

   b) Probably willing

   c) Probably unwilling

   d) Definitely unwilling

Vignette #2:

Caleb is a man with a college education. Up until a year ago, life was pretty much okay for Caleb. While nothing much was going wrong in Caleb's life, he sometimes feels worried, a little sad, or has trouble sleeping at night. Caleb feels that at times things bother him more than they bother other people and that when things go wrong, he sometimes gets nervous or annoyed. Otherwise Caleb is getting along pretty well. He enjoys being with other people and although he sometimes argues with his family, Caleb has been getting along with his family pretty well.

Please answer the following items regarding the person described above:

1. How willing would you be to move in next door to this person?

   a) Definitely willing

   b) Probably willing

   c) Probably unwilling

   d) Definitely unwilling

2. How willing would you be to become friends with this person?

   a) Definitely willing

   b) Probably willing

   c) Probably unwilling

   d) Definitely unwilling

3. How willing would you be to spend an evening socializing with this person?

   a) Definitely willing

   b) Probably willing

   c) Probably unwilling

   d) Definitely unwilling

4. How willing would you be to start working closely with this person on the job?

a) Definitely willing

b) Probably willing

c) Probably unwilling

d) Definitely unwilling

5. How willing would you be to have a group home/boarding house for people like this person in your neighborhood?

a) Definitely willing

b) Probably willing

c) Probably unwilling

d) Definitely unwilling

6. How willing would you be to have this person marry into your family?

a) Definitely willing

b) Probably willing

c) Probably unwilling

d) Definitely unwilling

Appendix D

Racism Scale

Please use the scale below each item to indicate how strongly you disagree or agree with each statement.

1. People with schizophrenia have jobs that the average person should have.

Strongly Disagree	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree

2. Most people with schizophrenia who receive support from the government (i.e. through welfare) could get along without it if they tried.

Strongly Disagree	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree

3. Average people and people with schizophrenia can never be really comfortable with each other, even if they are close friends.

Strongly Disagree	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree

4. Most politicians care too much about people with schizophrenia and not enough about the average person.

Strongly Disagree	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree

5. People with schizophrenia come from less able homes and this explains why they are not as well off as most people.

Strongly	Disagree	Somewhat	Neither agree	Somewhat	Agree	Strongly

Disagree		Disagree	nor disagree	Agree		Agree

6. I would be willing to have sexual relationships with a person with schizophrenia.

Strongly Disagree	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree

7. I would not mind if a suitably qualified person with schizophrenia was appointed as my boss.

Strongly Disagree	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree

8. I would not mind if a schizophrenic person who had a similar economic background as mine joined my close family by marriage.

Strongly Disagree	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree

9. Schizophrenic people should not push themselves where they are not wanted.

Strongly Disagree	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree

10. People with other types of mental illness have overcome social prejudice; people with schizophrenia should do the same without special favor.

Strongly Disagree	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree

11. It is just a matter of some people not trying hard enough. If schizophrenic people would only try harder they could be as well off as the average person.

Strongly Disagree	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree

12. People with schizophrenia living here teach their children values and skills different from those of the average person.

Strongly Disagree	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree

13. People with schizophrenia are less honest than the average person.

Strongly Disagree	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree

How different or similar do you think schizophrenic people are to average people like yourself....

14. In the values that they teach their children?

Very different	Somewhat different	Neither similar nor different	Somewhat similar	Very similar

15. In their religious beliefs and practices?

Very different	Somewhat different	Neither similar nor different	Somewhat similar	Very similar

16. In their sexual values or sexual practices?

Very different	Somewhat different	Neither similar nor different	Somewhat similar	Very similar

17. In the language that they speak?

Very different	Somewhat different	Neither similar nor different	Somewhat similar	Very similar

18. How often have you felt sympathy for people with schizophrenia?

Very often Fairly often Not too often Never

19. How often have you felt admiration for schizophrenic people living here?

Very often Fairly often Not too often Never

Appendix E

Demographics

Gender: male female

Age: _____

Do you have experience spending time or working with a mentally ill person?

Yes No

Appendix F

Debriefing

Thank you for participating in this study. If you would like a copy of the results or have any questions about the study, please contact Amy Guiomard at gui43323@obu.edu.Thank you for your time!

If you are participating in this study for extra credit, please email the following phrase to gui43323@obu.edu and include your name, ID number, and the class you would like credit for.

Bazinga012