THE EFFECTS OF A HISTORY OF VIOLENCE, CONTROLLABILITY OF CAUSE, AND DIAGNOSTIC LABELING ON ATTRIBUTIONS ABOUT INDIVIDUALS WITH MENTAL ILLNESS

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ABSTRACT

THE EFFECTS OF A HISTORY OF VIOLENCE, CONTROLLABILITY OF CAUSE, AND DIAGNOSTIC LABELING ON ATTRIBUTIONS ABOUT INDIVIDUALS WITH MENTAL ILLNESS

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The present study examined participants' assumptions, along with their likely emotional and behavioral responses to a vignette describing an individual with mental illness. The following information was manipulated within these vignettes: the individual's control over developing the mental illness, a history of violence, and the availability of diagnostic information. It was hypothesized that participants would have a more negative response to the description of an individual whose illness stems from a cause that is within his control. More negative reactions were found to the cocaine abuse condition as compared to the bio-genetic or automobile accident, but no significant difference was found between participants' reactions to the latter conditions. It was also hypothesized that participants would respond with more negative reactions to an individual described as having a history of violence, as compared to an individual with no history of violence. This hypothesis was supported by the current study. It was further hypothesized that participants would have the strongest negative reactions toward an individual whose symptoms were described or an individual who was described by both a label and symptoms. This hypothesis was not consistent with findings of the current study. Contrary to the previous research, familiarity with mental illness did not have a strong impact on the evaluations of participants. Suggestions for future research are included.

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CHAPTER I

INTRODUCTION

Individuals who suffer from mental illness are frequently the subject of stigmatization in our society (Corrigan & Penn, 1999). This stigma often leads to individuals with mental illness being separated from the community and discriminated against. For example, people are less likely to hire persons who are labeled as mentally ill (Link, 1982) and are less likely to lease apartments to them (Page, 1995). One way to account for stigma is through attribution theory. Weiner (1980) first proposed that the attributions that an individual makes about the cause of some event were linked to their emotional reactions and behavioral responses to that situation. Corrigan (2000) expanded upon Weiner's attribution model in an effort to better conceptualize the process of stigmatizing the mentally ill. In a study of college students (2003), Corrigan found that participants' familiarity with mental illness, perceptions of dangerousness, and attributions about the controllability of the cause of mental illness played a role in their emotional reactions and behavioral responses toward the individual with mental illness. However, Corrigan's study did not include a genetic attribution regarding the possible cause of mental illness nor did he investigate the interaction of the reported cause of the mental illness with levels of

dangerousness. The purpose of this thesis is to expand upon Corrigan's attribution model of stigma and mental illness. The first chapter of this manuscript presents a review of the literature concerning stigma, attribution modeling, and the connections between the two, as well as the specific purpose of the present study.

Stigma

One of the earliest conceptualizations of stigma was generated by Goffman who termed stigma an "attribute that is deeply discrediting" (1963, p. 3). He believed that stigma reduces the bearer "from a whole and usual person to a tainted, discounted one." Goffman also defined stigma as the relationship between an "attribute and a stereotype." Through the process of stigma, an attribution made about individuals who are part of a group (i.e. people with mental illness) takes on a negative connotation becoming a stereotype. Goffman's work was followed closely by research carried out by Scheff. Scheff's (1966) theory concerned the labeling of behavior, which in turn would lead to stereotypes about the labeled individual. This stereotyping results in the social rejection of the labeled individual, which may end in the individual leading a life of "residual deviance."

A research group lead by Jones (Jones et al., 1984) also made a contribution to the identification of the processes involved in stigma. They used the term "mark" in describing all the possible conditions that would identify an individual as being deviant. According to Jones, stigma occurs when this "mark" is linked to negative characteristics which leads to others making negative attributions about the stigmatized individual. Jones' concept of "peril" in stigma is also particularly relevant to the present study. Peril refers to feelings of fear or discomfort caused by

the mark of the stigmatized which play a part in the way in which an individual reacts toward the stigmatized.

A recent and more elaborate conceptualization of stigma comes from Link and Phelan (2001). They describe stigma as the confluence of the following dimensions: labeling, stereotyping, separating, status loss and discrimination, and dependence of stigma on power. In the first step of this model of stigmatization, the individual is labeled based on a socially relevant difference. This labeled difference is then linked to undesirable characteristics or stereotypes. The next step makes a distinction between the labeled group and the mainstream. The labeled group is considered markedly different and separated from "normal" society. This separation results in the individual being devalued by society and discriminated against. A dimension that plays an important part in Link and Phelan's model is that of power. Only when a more powerful group rejects a less powerful group does stigma truly occur. Although not included in their original model, the dimension of emotional reactions is important to the concept of stigma (Link, et al., 2004). Emotional reactions represent a response to stigma that is easily discernable by the stigmatized and may influence the behavior of the stigmatized. Emotional attributions about the behavior of the stigmatized also play an important role in the way in which an individual will think and act towards the stigmatized.

Stereotypes, Prejudice, and Discrimination

Another distinction must be made in the concept of stigma, the difference between public stigma and self-stigma. Public stigma, a concern of the present study, describes the way in which the general population stigmatizes individuals. Self-

stigma, on the other hand, refers to the loss of self-esteem and self-efficacy experienced by the stigmatized as public stigma is internalized (Corrigan and Watson 2002a, Corrigan 2000). Thus, the way that the public stigmatizes individuals affects the way that they stigmatize themselves.

Public stigma consists of three dimensions: stereotypes, prejudice, and discrimination (Corrigan, 2003). Stereotypes are opinions about groups of persons that have been collectively agreed upon by society. Although stereotypes generally have negative connotations, they are a cognitively efficient way to categorize information about groups of people. An individual may be aware of a stereotype but not necessarily endorse that stereotype. However, those who do endorse a set of stereotypes are considered to be prejudiced. These individuals have cognitive responses and emotional reactions attached to the stereotypes they hold. These thoughts and feelings lead to discrimination, which is a behavioral response to the stereotype. Discrimination generally results in negative responses to the stereotyped group (Corrigan, 2000; Corrigan and Watson, 2002b).

Discrimination can take many forms, which may include "coercion, segregation, hostile behaviors, withholding help, or avoidance" (Corrigan, 2003, p. 164). In the case of individuals with mental illness, treatment is often coerced, i.e. mandated by the courts or other authorities. Pescosolido and his colleagues (1999) observed that the general public and treatment providers may endorse coercion, through legal means, in the treatment of individuals with mental illness who are considered to be dangerous. Another type of discriminatory behavior toward

individuals with mental illness is their segregation into treatment or living facilities that are separated from the community.

The avoidance of individuals with mental illness or resistance to providing aid to individuals with mental illness also represents types of discrimination (Corrigan, et al., 2003). For example, the concept of social distance is a general desire to avoid interaction with individuals suffering from mental illness. Link et al. (1987) found that individuals labeled as mentally ill, compared to "normal" individuals, were evaluated by participants in the study as more dangerous, regardless of the actual levels of disturbed behavior presented to the participants, and this resulted in an increased desire for social distance. In another study, Link et al. (1999) found that, despite the public's increased recognition of specific mental disorders and their multiple underlying causes, the desire for social distance from the mentally ill and the perception of the mentally ill as dangerous is still strong. Socall and Holtgraves (1992) found a positive correlation between the expectation of a poor outcome for the individual's illness and a desire for social distance.

Research indicates that people are generally less likely to provide assistance and more likely to defame individuals considered mentally ill. People are less likely to hire persons who are labeled as mentally ill (Link, 1982) and are less likely to lease apartments to them (Page, 1995). Finally, there is evidence that people are more likely to falsely press charges for violent crimes against individuals with mental illness (Sosowsky, 1980; Steadman, 1981).

The concept of labeling must also be considered when evaluating the effects of stigma. Link (1982) documented that persons who publicly bore the label of mental

illness had less income and were more likely to be underemployed, compared to a similarly impaired group of individuals who had not been labeled. Another study, which manipulated the presence of a label and the presence of aberrant behavior, found that people were still likely to engage in stigmatizing behavior towards an individual labeled as having mental illness, but not demonstrating any aberrant behavior. This psychiatric label and the consequent negative social reactions can exacerbate the course of a person's mental illness (Link, Cullen, Struening, Shrout, and Dohrenwend, 1989).

The Attribution Model

The attribution theory of Wiener (1980) can aid in conceptualizing the connection between stigmatizing attitudes and discriminatory behavior. Attribution theory links human motivation and emotion to efforts to understand the causes behind everyday events (Weiner, 1980). Attribution analysis begins with trying to understand the reasons for the outcome of a particular situation, in this case, the cause of the mental illness. The individual makes a decision about the reasons for an outcome based on the locus of control, the stability of the cause, and the controllability of the cause. The locus of control can be either internal (in the person) or external (the environment). The stability of the cause may be stable (relatively permanent and unchanging) or unstable (subject to change). The controllability of cause is either controllable (subject to volitional control) or uncontrollable (not subject to volitional control) (Weiner, 1980). Controllability of cause can also be broken down into onset controllability (the individual is responsible or contracting the illness) and offset responsibility (the individual is actively trying to prevail over their illness) (Schwarzer

& Weiner 1991). These factors determine an individual's inferences about his or her responsibility for a particular outcome. An individual's decision about responsibility is followed by an emotional reaction, which in turn affects the individual's behavior toward the person being evaluated, as well as expectations about this person (Weiner, 1995).

The public's attributions about the controllability of the cause of an individual's mental illness would therefore have a great effect on their behaviors and emotional reactions toward a person with mental illness. If the cause of failure (i.e. mental illness) is seen as being in the individual's control, then the individual may be responded to with anger and little pity and may be punished or neglected. However, if the perception of the cause of the failure is not in the person's control, then the individual is more likely to receive pity and help (Weiner, 1986). Weiner also noted (1988) that mental and behavioral problems are often considered onset-controllable and that this leads to a similar set of responses (i.e. anger, no pity, and absence of helping behaviors). Parsons (1951) noted that, if an individual is believed to have knowingly endangered his or her own health, then others will react to them with anger and evaluate them negatively. Batson (1987) suggests that empathy for an individual may be reduced by the knowledge that the person's difficulties have been caused by their own undesirable or irresponsible behaviors. People will also make attributions about the controllability of the negative behavior of an individual who has mental illness. Wiener found that, when an individual is considered in control of his or her psychotic symptoms, people perceive him or her as responsible for his or her actions and therefore react with anger (Weiner et al., 1988).

Other evidence suggests that the attributions that people make about the controllability of an individual's mental illness are related to their willingness to help those individuals. It was found that people are less willing to lend aid to a person with severe mental illness when they believe that the person is in control of their symptoms (Corrigan, River, Luden, Penn, et al., 2000). Though not concerned specifically with mental illness, a study by Reisenzen (1986) reinforces the association of attributions about the controllability of cause and people's willingness to help. In this study, a sample of college students were evaluated on their willingness to assist a person whom they were told was either "drunk," "skipped class to go to the beach," "ill," or "had difficulty seeing." The study found that the students were less likely to help others who were labeled "drunk" or who had "skipped class to go to the beach." Furthermore, the students' feelings of anger or pity had an effect on their decision to help. Additionally, people often make a distinction between physical and psychological-behavioral disorders when making attributions about controllability. Research also suggests that people tend to believe that psychological-behavioral disorders involve more personal control than physical disorders (Crandall and Moriarty, 1995).

There is less evidence in the literature concerning the role of locus of control and stability of cause in the attributions that individuals make about a person with mental illness. In a study of Americans' concept of mental illness (Martin, et al., 2000), participants were more likely to attribute mental illness to such causes as chemical imbalances, genetic factors, and stressful life circumstances (external) than to such concepts as "bad character" (internal). This is a positive sign given that

internal attributions about a person's mental illness increased the desire for social distance, while external attributions reduce the desire for social distance (Martin, et al., 2000). Research has found that, although the stability of cause does not necessarily affect the type of emotional and behavioral responses to an event, it does play a role in the strength of these responses (Weiner, 1995). Corrigan (2000) suggests that if a cause is considered stable, attributions about it are more heavily weighted than when the cause is considered unstable. For instance, if the cause of a mental illness is considered stable (i.e. untreatable) then it may reduce the amount of effort a person is willing to put into helping the individual with mental illness.

Dangerousness

The perception of dangerousness also plays a role in the affective and behavioral attributions that people make about individuals with mental illness. In general, research has found evidence of attributing negative and unexpected behaviors to an internal locus of control (Jones and McGillis, 1976). Martin (2000) found a relationship between ones' attributing mental illness to "bad character" (an internal attribution) and the perception that the mentally ill individual is dangerous. In a study by Pescolidio et al. (1999), most respondents indicated that people labeled as having schizophrenia are likely to be violent toward others. In general, when a person in the vignette bore the label of mental illness, participants indicated that they believed the individual to be less competent and more likely to behave violently. The same participants were also more willing to endorse coercing these individuals into receiving treatment. Martin et al. (2000) also found a connection between the perception of dangerousness and the endorsement of segregating individuals with

mental illness from the rest of society. Furthermore, information that leads to external cause attributions about a mentally ill person's violent behavior results in a less negative evaluation of that behavior as compared to vignettes that implicated a more internal source of the behavior (Boisvert and Faust, 1999).

Familiarity

The variable of familiarity seems to have a moderating effect on the attributions made about an individual with mental illness. According to Holmes et al. (1999), familiarity is the extent of an individual's knowledge and experience with mental illness. Holmes found an inverse relationship between familiarity with mental illness and prejudicial attitudes about mental illness. Link and Cullen (1986) reported that increased familiarity was related to decreases in feelings of fear towards individuals with mental illness. Along similar lines, Ingamells et al. (1996) found a discrepancy between the attitudes of participants toward those with mental illnesses when they were split into a group that had a low level of contact with individuals with mental illness and a group that had a high level of contact with individuals with mental illness. When asked to respond to a vignette of an individual with mental illness, the low contact group desired more social distance than the high contact group.

Desforges et al. (1991) found that individuals who have positive contacts with members of a stigmatized group must resolve the discrepancies between their stereotypes about the stigmatized group and their positive encounter with a member of that group. This contact leads to a more positive attitude toward the individual member of the stigmatized group that may then be generalized to the entire group. Previous contact with the severely mentally ill has also been found to reduce the

number of negative emotions held about individuals with mental illness (Arikan and Uysal, 1999). Finally, Penn and his colleagues (1999) reported that respondents who had prior contact with individuals with mental illness evaluated a client with mental illness described in a vignette as being less dangerous.

An Attribution Model of Public Discrimination Towards Persons with Mental Illness

A recent study by Corrigan et al. (2003) has attempted to delineate a model that connects causal attributions, familiarity, perceived dangerousness, emotional responses, and the likelihood of helping or rejecting behaviors. They postulated that an individual's contact with the mentally ill (familiarity) would influence his or her perception of the danger represented by the individual with mental illness. This perception of dangerousness and attributions that the individual makes about the controllability of the person's mental illness would in turn influence his or her emotional response to the person with mental illness. Finally, this emotional response would mediate the extent that the person would help or reject those with mental illness. Participants were asked to respond to vignettes that varied the controllability of the cause of the mental illness and the level of dangerousness. The results showed that discriminatory responses, such as avoidance and endorsing coercive treatment, could be predicted by perceptions of dangerousness and attributions about the cause of the mental illness. If the cause of the mental illness was seen as controllable, individuals responded with feelings of anger and fear. These emotional reactions were linked to a desire for social distance and support for coercive treatment. However, when the cause was not considered controllable, participants tended to respond with

pity for the individual and endorse more supportive behavioral responses. Perceptions of dangerousness were correlated with feelings of fear, which was a strong predictor of a desire for social distance and coercive treatment. Familiarity with mental illness was found to moderate a desire for social distance and support for coercive forms of treatments. Familiarity was found to be positively correlated with feelings of pity and negatively correlated with feelings of anger and fear.

In a follow-up to the previous study, Angermeyer, Matschinger, and Corrigan (2004) attempted to replicate the prior findings with a representative survey conducted in Germany. Unlike the previous study, the vignettes used in this research either described the symptoms associated with schizophrenia or the symptoms associated with major depressive disorder. Despite differences in methodology, this study replicated many of the findings from Corrigan et al. (2003). Familiarity with mental illness helped to moderate perceptions of dangerousness. A lack of perceived dangerousness reduced feeling of fear, which in turn reduced a desire for social distance. Again, the model was able to demonstrate a connection between attributions about controllability and dangerousness, emotional reactions, and behavioral responses.

There are several questions that are left unanswered by the current research using attribution models in the study of stigma towards the mentally ill. Though the literature has addressed the negative impact of mental illness (Link, 1982; Link, Cullen, Struening, Shrout, and Dohrenwend, 1989), the effects of labeling have not been assessed within the framework of an attribution model. Furthermore, are attributions different when a participant is given a direct label as opposed to diagnostic

information pertaining to the individual in the vignette? While previous research has made some attempts to differentiate between levels of the controllability of the cause of the mental illness, the use of a bio-genetic origin for schizophrenia may have a moderating effect on the attributions made about an individual with mental illness. Finally, prior research has not compared the variables of controllability, dangerousness, and label so that presence of interactions between these variables may be clearly established.

The Present Study

The purpose of the present study is to expand upon the findings of Corrigan (2003). As in the study by Corrigan, the current study will investigate the relationship between causal attributions, dangerousness, emotional responses, and behavioral responses. Participants will be presented with vignettes that describe an individual with mental illness. The vignettes will vary in the controllability of cause (what lead to the mental illness), history of violence, and the availability of diagnostic information. In Corrigan's original study, the cause of the mental illness was either attributed to drug use or head trauma due to automobile accident. In the present study, a third cause, a biogenetic origin, will be included.

It is hypothesized (Hypothesis I) that participants will have a more negative response to the description of an individual whose illness stems from conditions within his control (i.e., the abuse of cocaine), as compared to automobile accident or bio-genetic descriptors. Participants responding to the drug abuse condition are predicted to respond with greater feelings of fear and anger, as well as reduced feelings of pity, as compared to participants responding to the other two conditions.

Participants responding to the abuse of cocaine descriptor are also expected to endorse the need for coercive treatment and a desire to withhold help. Although an automobile accident and bio-genetic cause may both be considered a "low controllability" condition, this study will explore the possibility that participants will perceive a disorder that is inherited as different from a disorder that has been caused by an accident. It is predicted (Hypothesis II) that participants will respond with increased feelings of pity and decreased feelings of anger and fear towards the bio-genetic descriptor, as compared to either the automobile accident or drug abuse descriptors. It is also hypothesized that participants will believe the individual with the bio-genetic descriptor to be less personally responsible and to endorse fewer items indicating the need for coercive treatment or the withholding of help.

Although all three causes are labeled as schizophrenia within this study, this is not an accurate reflection of the nature of schizophrenia. As summarized in a recent article by Kotsiubinskii (2002), the current view of the etiology of schizophrenia uses a biopsychosocial or diathesis-stress model. Individuals are thought to have a genetic predisposition toward the development of the disorder, which appears to manifest itself in the form of abnormal neurophysiology. This vulnerability or diathesis may result in the individual developing schizophrenia when they are placed in contact with environmental or personal stressors. Though the specifics of both the neurophysiologic abnormalities and stressors are still under investigation, the biopsychosocial model is the generally accepted etiological model for schizophrenia.

The labels in the present study have been simplified in order to remain clear and consistent for participants who have little or no prior training in psychology and in

order to evoke the imagery that the general public may associate with someone who suffers from schizophrenia. The first cause, an automobile accident, would be more properly labeled a psychotic disorder due to a general medical condition. The second cause, abuse of cocaine, should bear the label of substance-induced psychotic disorder. Finally, while it is thought that a bio-genetic component plays a role in the development of schizophrenia, it is not considered the sole cause of the disorder (APA, 2000).

The second variable included in the vignettes will be a history of violence, which will reflect the level of dangerousness. A major weakness in the Corrigan study is that he did not systematically vary the level of dangerousness with the cause of the mental illness. The current study will manipulate the history of violence and cause of the mental illness across vignettes. It is hypothesized (Hypothesis III) that participants will respond to an individual described as having a history of violence with greater feelings of anger and fear, as well as reduced feelings of pity. It is also predicted that participants will endorse coercive treatment and the withholding of help for individuals who they are told have a history of violence.

The final variable will be diagnostic information and it will have three levels: a diagnostic label of schizophrenia, a description of symptoms associated with schizophrenia without the label of schizophrenia, and both a description of symptoms associated with schizophrenia and the label of schizophrenia. It is hypothesized (Hypothesis IV) that participants may have a stronger negative reaction (i.e. feelings of fear and anger) toward an individual bearing the label of schizophrenia as compared to an individual whose symptoms are described, but who is not given a label. It is also

predicted that participants will not react as strongly to an individual who both bears a label and a list of symptoms as the list of symptoms, will give the participants more information on what is meant by the label of schizophrenia.

The impact of these variables will be evaluated through an attribution questionnaire that includes the following constructs: personal responsibility beliefs, pity, anger, fear, the likelihood of helping, and support for coercion-segregation. As in the study by Corrigan, a second measure will evaluate the participants' familiarity with individuals with mental illness. The effect of this moderator variable on the attributions that participants make will be assessed. It is hypothesized (Hypothesis V) that those participants who are more familiar with individuals suffering from a mental illness will be less likely to endorse coercive treatment and less likely to withhold help from the individuals in the vignette. It is also predicted that these individuals will indicate greater feelings of pity, as well as reduced feelings of anger and fear towards the individual described in the vignette.

The present study is expected to expand our knowledge of the stigmatization process involving the mentally ill. A better understanding of the mechanisms that underlie stigma will hopefully lead to improved ways in which to educate the public about the reality of mental illness.

CHAPTER II

METHOD

Participants

Participants included 360 undergraduate students enrolled in an introductory psychology course at the University of Dayton. The participants included 237 female students and 123 male students with a mean age of 18.18 (SD = 1.92). Of the sample 90.0% of the students were Caucasian, 6.9% were African-American, 1.7% were Latino, 0.6% were Alaskan or Native American and 0.8% indicated the other category. The participants' responses indicate that 67.5% of their fathers and 58.7% of their mothers have received either a bachelor's degree or some form of graduate degree. All students received course credit for participating in the study.

Instruments and Measures

Vignettes

Eighteen vignettes were written for this study (see Appendix A), each describing "David a 30-year old single man" who "was hospitalized for a short period of time at a local psychiatric hospital," and "currently works for a large paper manufacturing company." The information provided in the different vignettes was designed to manipulate the following variables: controllability of cause (bio-genetic,

automobile accident, or drug use), dangerousness (history of violence vs. no history of violence), and diagnostic labeling (label only, symptoms only, or label plus symptoms). Each participant was given one of the three following descriptions of the cause of David's mental illness: (1) "David developed schizophrenia as the result of a genetic disorder that he inherited from his parents"; (2) "David developed schizophrenia following a severe automobile accident"; or (3) "David developed schizophrenia following years of abusing cocaine." Each participant was also given one of the two following sets of information on David's history of violence: (1) "David recently struck and injured one of his co-workers without provocation"; (2) "David has never committed a violent act." Participants were also presented with one of three following sets of diagnostic information: (1) "...has schizophrenia"; (2) "... hears voices that others do not hear. David also believes that his co-workers secretly plot against him and that others are capable of reading his thoughts"; or (3) both (1) and (2) above.

Demographic Questionnaire:

The demographic questionnaire asked participants about their gender, age, ethnicity, year of college, and their parents' educational background (see Appendix B). This information was analyzed to determine if the participants' backgrounds have an impact on their responses to the attribution questionnaire.

Level-of-Contact Report

This modified version of the level-of-contact report (Holmes, et al., 1999; see Appendix C) is a 13-item measure that assesses participants' familiarity with individuals with severe mental illness. Respondents checked all situations on the

measure that they have experienced during their lives. A participant's index of contact score was the previously determined rank of the most intimate situation involving those with mental illness chosen by the participant. A score of 1 was assigned to the least intimate situation which is described in item 8 ("I have never observed a person that I was aware had a severe mental illness") and a score of 13 was assigned to the most intimate situation which is described in item 5 ("I have a severe mental illness"). In this version, a thirteenth question (item 7) was added which asked respondents if they have an immediate family member with a severe mental illness. This was intended to distinguish between a close family member and a "relative" with severe mental illness. The wording of items 2 and 9 were modified to differentiate between those who provide clinical treatment for those with mental illness and those who provide other services. Finally a separate question was added that asked participants to report, on a scale of 1 (no personal contact whatsoever) to 10 (very close personal contact), how familiar they believed that they were with individuals with mental illness.

Attribution Questionnaire

The 20-item attribution questionnaire is based upon a measurement used by Corrigan et al. (2003; see Appendix D) that assesses the following constructs: personal responsibility beliefs, pity, anger, fear, the likelihood helping, and support for coercion-segregation. The version in this study used a 6-point Likert scale (1 = "strongly disagree" to 6 = "strongly agree") in order to eliminate neutral responses that would occur on a scale with an odd number of responses. Some of the items from the original measure were reworded in order to increase the clarity of the statements.

Items from the original measure were also reworded so that all responses would indicate the degree that participants agreed with each statement. A higher score indicated a greater amount of each characteristic endorsed by the participant. For example, a response of six on a question representing the construct of anger would indicate that the participant felt more anger than if he or she had responded with a two. The six constructs can be divided into three categories: negative, positive, and neutral. Anger, fear, and coercion-segregation are negative; pity and likelihood of helping are positive; and personal responsibility is neutral. A subscale score for each of the above constructs was calculated by summing the participants' responses to each item for that subscale and dividing by the number of items on that constructs subscale. Therefore, all subscale scores can range from 1 to 6. The version of the questionnaire that was given to participants is located in Appendix E.

Schizophrenia Knowledge Question

Participants were asked an open-ended question about the symptoms and common problems that they associate with schizophrenia (see Appendix F). This question is intended to help identify participants' understanding of the term schizophrenia. This data was analyzed to establish the impact of participants' personal understanding of schizophrenia on their responses to the attribution questionnaire.

Procedures

Information was collected from participants in groups ranging from 12 to 25 individuals during one session that lasted approximately 30 minutes. Initially, participants were asked to review and sign an informed consent form (see Appendix J). Participants then completed a demographic questionnaire. Following this,

participants responded to the level-of-contact report. Each participant read only one of the eighteen vignettes describing an individual with mental illness. Within each session all 18 vignettes were distributed beginning with the first vignette being given to the first participant. In response to this vignette, participants completed the attribution questionnaire. After responding to the vignette, participants completed the schizophrenia knowledge question. Following the session, participants were provided with a debriefing form (see Appendix K).

CHAPTER III

RESULTS

The internal consistency of the sets of questions that represent each of the six factors (personal responsibility beliefs, anger, fear, pity, likelihood of helping and coercion-segregation) that are hypothesized to be included within the 20 items of the attribution questionnaire was analyzed. The following are the alpha coefficients for each factor: personal responsibility beliefs (.87), anger (.84), fear (.86), pity (.75), likelihood of helping (.71), and coercion-segregation (.86).

A series of six 2 X 3 X 3 (history of violence X controllability of cause X diagnostic information) between subjects analyses of variance were conducted, one for each of the six attribution variables (personal responsibility beliefs, anger, fear, pity, likelihood of helping and coercion-segregation) measured by the attribution questionnaire. The complete summary tables for these analyses are located in Appendix G. Tables which include the means and standard deviations for each of the six attribution variables for all independent variable levels are included in Appendix H. Table 1 includes the p-values for the main effects for all six of these attribution variables' ANOVAs.

Hypothesis I and Hypothesis II: The Effect of a Controllability of Cause

Hypothesis I suggested that participants would endorse more negative

Table 1

Analysis of Variance (p-values) for the Main Effects of the Six Attribution Variables

	Responsibility	Pity	Anger	Fear	Helping	Coercion
Violence (V)	.302	.265	.001	.000	.000	.000
Controllability (C)	.001	.002	.001	.000	.000	.000
Diagnostic (D)	.351	.033	.055	.004	.042	.000

attributions and fewer positive attributions about an individual whose illness stems from drug abuse as compared to either an automobile accident or bio-genetics. Hypothesis II predicted that there would also be a difference in participants' reactions to the bio-genetic and automobile accident causes with a more favorable reaction to an individual whose illness resulted from a bio-genetic cause. A main effect of controllability of cause was found for personal responsibility, F (2, 360) = 159.13, p = .001, and for pity, F (2, 360) = 6.18, p = .002. Main effects were also found for anger, F (2, 360) = 12.07, p = .001 and for fear, F (2, 360) = 8.01, p < .001. Finally, controllability of cause was found to have a significant effects on the likelihood of helping, F (2,360) = 17.39, p < .001 and coercion-segregation, F (2, 360) = 11.36, p < .001 (See Tables 10-15 in Appendix G). A series of Tukey's post-hoc tests (summarized in Table 2) found that the drug abuse cause resulted in significantly more anger, fear, desire to engage in coercion-segregation, and feelings of personal responsibility than either the automobile accident cause or bio-genetic cause. The drug abuse cause also resulted in reduced feelings of pity and a reduced desire to help as compared to either the automobile accident cause or bio-genetic cause. In no case was a significant difference in the six attribution variables found when the automobile accident cause and bio-genetic cause were compared.

Hypotheses III: The Effect of a History of Violence

Hypothesis III suggested that participants would endorse more negative attributions and fewer positive attributions about an individual who was described as having a history of violence as compared to an individual who did not. No significant effect of a history of violence was found for either the personal responsibility or pity

Table 2

Mean Values (Standard Deviations) and Tukey's Results Indicating Significant Mean Differences for Controllability of Cause

	Bio-genetic (BG)	Automobile (AA)	Drug Abuse (DA)	Tukey's Results
Responsibility	1.76 (0.82)	1.85 (0.84)	3.70 (1.17)	DA > AA** DA > BG**
Pity	4.69 (0.85)	4.75 (0.86)	4.39 (0.86)	AA > DA** BG > DA*
Helping	3.99 (0.75)	4.09 (0.79)	3.56 (0.82)	AA > DA** BG > DA**
Anger	2.85 (0.96)	2.86 (1.04)	3.39 (1.03)	DA > AA** DA > BG**
Fear	3.06 (1.10)	3.18 (1.02)	3.54 (1.12)	DA > AA* DA > BG**
Coercion	3.24 (1.02)	3.08 (1.08)	3.63 (1.06)	DA > AA** DA > BG**

** $p < .01$ level

* $p < .05$ level

factors. A significant main effect for history of violence was found for anger, F (1, 360) = 20.63, p = .001, fear, F (1, 360) = 92.34, p < .001, likelihood of helping, F (1, 360) = 44.50, p < .001, and coercion-segregation, F (1, 360) = 103.34, p < .001 (See Tables 10-15 in Appendix G). The results of the main effects indicated that the presence of a history of violence resulted in a reduced desire to help, an increased desire to engage in coercion-segregation, more anger, and more fear (See Table 3).

Hypothesis IV: The Effect of Diagnostic Information

Hypothesis IV predicted that participants would have the most negative and least positive reaction to the label only condition, followed by the label and symptoms condition and finally the symptoms only condition. Significant effects of diagnostic information were found for pity, F (2, 360) = 3.44, p = .033, fear, F (2, 360) = 5.60, p = .004, likelihood of helping, F (2, 360) = 3.20, p = .042, and coercion-segregation, F (2, 360) = 10.99, p < .001 (See Tables 10-15 in Appendix G). A series of Tukey's post-hoc tests were used to examine the effects of diagnostic information on the six attribution factors (see Table 4). For the pity factor, the symptoms only condition resulted in more pity than the label only condition. For the fear factor, the label and symptoms condition resulted in more fear than label only. For the coercion-segregation factor, the symptoms only resulted in greater agreement with the need for coercion-segregation than label only condition and the label and symptoms condition resulted in greater agreement than the label only. Though a significant effect of diagnostic information was found for the likelihood of helping factor, a Tukey's post-hoc did not find a significant difference between the levels of this factor. However, there were two results that approached significance: a greater endorsement

Table 3

Mean Values (Standard Deviations) and Main Effects Indicating Significant Mean Differences for History of Violence

	Violence (V)	No Violence (NV)	Main Effects
Responsibility	2.49 (1.34)	2.39 (1.27)	
Pity	4.66 (0.80)	4.56 (0.93)	
Helping	3.62 (0.75)	4.14 (0.80)	NV > V**
Anger	3.26 (0.06)	2.80 (1.07)	V > NV**
Fear	3.75 (0.92)	2.77 (1.04)	V > NV**
Coercion	3.80 (0.94)	2.83 (0.98)	V > NV**

** $p < .01$ level

* $p < .05$ level

Table 4

Mean Values (Standard Deviations) and Tukey's Results Indicating Significant Mean Differences for Diagnostic Information

	Label (L)	Symptoms (S)	L+S	Tukey's Results
Responsibility	2.53 (1.35)	2.44 (1.35)	2.35 (1.23)	
Pity	4.46 (0.87)	4.74 (0.90)	4.64 (0.81)	S > L*
Helping	4.02 (0.83)	3.81 (0.79)	3.80 (0.83)	
Anger	2.86 (1.12)	3.12 (1.04)	3.11 (0.94)	
Fear	3.04 (1.18)	3.29 (1.00)	3.45 (1.07)	L+S > L**
Coercion	3.03 (1.12)	3.58 (1.00)	3.35 (1.05)	L+S > L* S > L**

** $p < .01$ level

* $p < .05$ level

of helping for label only than for symptoms only ($p = .084$) and a greater endorsement for label only than for label and symptoms ($p = .065$). Personal responsibility and anger were not found to be significantly impacted by diagnostic information.

Interactions

There was only one significant interaction between the three independent variables across the six attribution variables. An interaction between history of violence and diagnostic information was found for the anger factor, $F(2, 36) = 3.73$, $p = .025$. This interaction is illustrated in Figure 1. A significant simple effect was found for diagnostic information for the no history of violence condition only, $F(2, 360) = 6.58$, $p = .002$. For the no history of violence condition, participants indicated feeling less anger for the label only condition ($M = 2.43$) compared to either the symptoms only ($M = 2.96$) conditions or label and symptoms condition ($M = 3.00$). For the history of violence condition, there were no significant differences among the three types of diagnostic information.

Hypothesis V: The Effect of Familiarity with Mental Illness

Hypothesis V predicted that participants' familiarity with individuals diagnosed with a mental illness would mediate their negative attributions and increase the likelihood of positive attributions about the individual described in the vignette. Participants completed two measures of familiarity with individuals who are mentally ill: the level-of-contact report and a question asking participants to rate their familiarity with mental illness on a 10-point scale. The distributions for the level-of-contact report and familiarity rating are summarized in Tables 5 and 6. As seen in

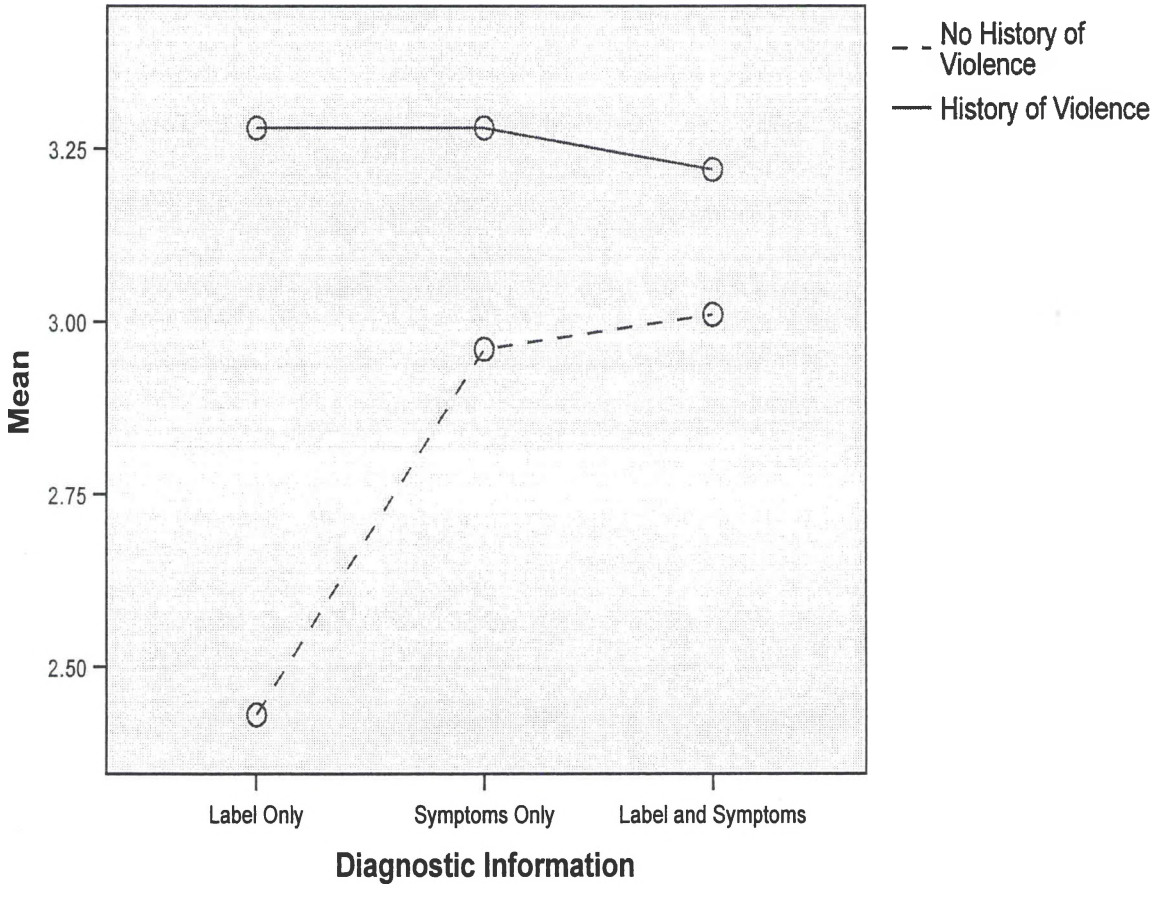

Figure 1. Interaction of diagnostic information and history of violence for the anger factor

Table 5

Frequency Distribution for Level-of-Contact Report Scores

Score	Description	*f*	*P*
1	Never Observed	0	0.0
2	Observed in Passing	0	0.0
3	Movie or Television	30	8.3
4	Documentary	47	13.1
5	Frequent Observation	20	5.6
6	Place of Employment	16	4.4
7	Non-clinical	22	6.1
8	Clinical Treatment	12	3.3
9	Family Friend	93	25.8
10	Relative	87	24.2
11	Immediate Family Member	20	5.5
12	Live with a Person	12	3.3
13	Have Severe Mental Illness	1	0.3

Note. A higher score indicates a greater level of intimacy with individuals with a mental illness.

Table 6

Frequency Distribution for Familiarity Question

Likert Scale Value	*f*	*P*
1 (no personal contact)	3	0.8
2	21	5.8
3	53	14.7
4	46	12.8
5	52	14.4
6	58	16.1
7	59	16.4
8	39	10.8
9	14	3.9
10 (very close contact)	15	4.2

Table 5, 50% of the respondents were familiar with mental illness through a family friend or relative. Table 6 shows wide variability in the participants' rating of contact with a mean value of 5.5 (SD = 2.13) on this 10-point Likert scale. Also included are the frequencies of responses for each of the questions on the level-of-contact report (See Table 7). The two measures of familiarity were significantly correlated (r = .51). As indicated in Table 8, there was a significant correlation between participants' level-of-contact scores and their feelings of fear (r = -.11). Participants' responses to the familiarity question were significantly correlated with a number of dependent variables indicating that participants more familiar with a person with mental illness were less likely to believe the person depicted in the vignette was personally responsible (r = -.13), less angry with (r = -.14) and afraid of (r = -.14) him, as well as more likely to help (r = .16) (See Table 8). Although these low correlations are significant, likely a product of the large sample size, they have little practical value.

The attribution questionnaire factors were then reanalyzed using a series of six 2 X 3 X 3 (history of violence X controllability of cause X diagnostic information) analyses of covariance with the level-of-contact index score and self-report level of familiarity score serving as the covariates. Only one difference from the original analyses of variance occurred when the covariates were added to the analyses; the presence of a main effect of diagnostic information in the analysis of participants' responses to the anger factor. Note that this effect approached significance (p = .055) in the original analysis. However, given the significant interaction in both analyses, the discrepancy is of little importance (See Appendix I).

Table 7

Frequency Distribution for Level-of-Contact Report Questions

Question	Description	*f*	*P*
1	Movie or Television	358	99.4
2	Clinical Treatment	28	7.8
3	Observed in Passing	348	96.7
4	Frequent Observation	135	37.5
5	Have Severe Mental Illness	1	0.2
6	Place of Employment	76	21.1
7	Immediate Family Member	31	8.6
8	Never Observed	18	5.0
9	Non-clinical	74	20.5
10	Family Friend	160	44.4
11	Relative	106	29.4
12	Documentary	236	65.5
13	Live with a Person	13	3.6

Table 8

Correlations for Level-of-Contact and Familiarity Questions

Factors	Level-of-Contact	Familiarity
Personal Responsibility Beliefs	-0.06	-0.13**
Pity	0.02	0.03
Anger	-0.01	-0.14*
Fear	-0.11*	-0.14*
Likelihood of Helping	0.09	0.16*
Coercion-Segregation	-0.09	-0.09
Level-of-Contact	1.00	0.51**
Familiarity Score	0.51**	1.00

** $p < .01$ level

* $p < .05$ level

Schizophrenia Knowledge Question

The responses to the schizophrenia knowledge question asking participants to "list the common problems and symptoms that you associate with schizophrenia" were divided into 16 categories that encompassed the various participant responses. For example, any responses that indicated experiencing stimuli that did not exist (either auditory or visual) were included in the category of hallucinations. Another category, "socially inappropriate behavior," represented a broader range of responses including: acting withdrawn, having difficulty interacting in social environment, or inappropriate gestures and remarks. The number (and percentage) of participants responding in each category is summarized in Table 9. The most common symptoms and problems that participants associated with schizophrenia were hallucinations (n = 209), paranoia (n =131), and multiple or split personalities (n = 101). Twenty one participants indicated that they did not know enough to respond to the question.

Table 9

Responses to Schizophrenia Knowledge Question

Category	*n*	*P*
Hallucinations	209	58.05
Paranoia	131	36.38
Split or Multiple Personalities	101	28.05
Socially Inappropriate Behavior	97	26.94
Delusions or Impaired Sense of Reality	66	18.33
Violence or Aggression	66	18.33
Mood Swings	62	17.22
Loss of Control or Instability	60	16.66
Anxiety or Fear	57	15.83
Impairments in Thinking	55	15.27
Don't Know	21	5.83
Motor Disturbances	19	5.27
Depression	17	4.72
Speech Impairments	6	1.67
Self-Care Difficulties	4	1.11

Note. The Schizophrenia Knowledge Question asked participants to "list the common problems and symptoms that you associate with schizophrenia." The various participant responses were then divided into the 16 categories listed above.

CHAPTER IV

DISCUSSION

This study examined the impact of history of violence, controllability of cause, and diagnostic information on the attributions that participants would make about and emotional reactions they would have to an individual with mental illness (personal responsibility beliefs, anger, fear, pity, likelihood of helping and coercion-segregation).

Hypothesis I and Hypothesis II: The Effect of a Controllability of Cause

An effect of the controllability of cause was found in the case of all six attribution factors. As hypothesized, the drug abuse cause for mental illness resulted in greater agreement with negative attributions and negative emotional reactions (anger, fear, and coercion-segregation) and less agreement with positive attributions (pity and likelihood of helping). These results replicate the results of Corrigan's (2003) study in which participants expressed greater desire to avoid and less interest in helping an individual who was said to be in control of his mental illness. These findings may be further explained by Crandall and Moriarty's (1995) finding that people believe that mental illness involves more personal control than physical illness. However, the hypothesis that a bio-genetic cause would result in increased positive

and decreased negative reactions to an individual with mental illness when compared to the automobile accident cause was not supported. Participants responded to the attribution questionnaire in a similar manner for both of these conditions on all six attribution factors.

Controllability of cause was the only variable to have a significant impact on the personal responsibility beliefs factor. This is consistent with the finding by Weiner (1980) that an individual's perception of controllability directly influences their beliefs about another person's responsibility for their present condition. Not surprisingly, participants believed a person with mental illness to be more personally responsible for a drug induced mental illness than for a mental illness caused by either an automobile accident or bio-genetic. Furthermore, the perception of equal responsibility for a bio-genetic and an accident caused mental illness may explain the lack of differentiation among these two causes on the other five variables.

Hypotheses III: The Effect of a History of Violence

Another important finding was the impact that a history of violence had on participants' responses. As hypothesized, the presence of a history of violence in the vignette resulted in participants being more likely to indicate feelings of fear and anger, as well as endorse attitudes that promoted coercion or segregation. Martin et al. (2000) also found that the perception of dangerousness lead to the endorsement of coercion and segregation. When a history of violence was present, they were also less likely to endorse helping behaviors. As hypothesized, individuals responded in a negative manner to a person with mental illness whom they believed to be dangerous. This is consistent with Corrigan (2003) who found that an increase in the level of

perceived dangerousness leads to the endorsement of discriminatory behaviors and greater feelings of fear. History of violence did not have a significant impact on others' feelings of pity, which was unexpected as it was reasoned that feelings of pity would be reduced by expectations of dangerousness. In this case, it is speculated that although participants may fear and indicate a need for distance from an individual described as having a history of violence, this concern does not reduce their feelings of pity for the individual's condition.

Hypothesis IV: The Effect of Diagnostic Information

It was hypothesized that for the diagnostic information variable participants would respond with the most negative reaction to the label only condition and the most positive reaction to the symptoms only condition with the reaction to the label and symptoms condition falling somewhere in the middle. In a study by Link et al. (1987) participants evaluating an individual labeled as mentally ill considered that individual to be more dangerous and indicated the desire for social distance from that individual. A more recent study by Link et al. (1999) also found that individuals labeled as mentally ill are considered more dangerous. More specifically, Pescolidio et al. (1999) found individuals in a vignette who were labeled as mentally ill to be less competent, more likely to behave violently, and were likely to endorse coercive treatment.

In the present study, participants responded with more pity to the symptoms only condition than to the label only condition. However, participants indicated more fear to the label and symptoms condition than to label only. The strongest endorsements for segregation-coercion were for symptoms only, which was greater

than the endorsement for both label and symptoms and label only. Though there was a significant effect of diagnostic information on the likelihood of helping the results from the Tukey's post-hoc approached, but did not reach significance. For likelihood of helping, the label only condition resulted in greater (non-significant) endorsement of helping than either symptoms only or label and symptoms. It is theorized that participants reacted to the label only condition with more helping responses due to the social desirability of reaching out to an individual with a clearly labeled mental illness. Participants had the strongest reactions of pity, fear, and segregation-coercion to either the symptoms only condition or the label and symptoms condition. Participants may have had a stronger emotional reaction to the description of symptoms as opposed to the label of schizophrenia. Participants may simultaneously feel repelled by the strangeness of the symptoms described (fear), yet still feel a sense of how unfortunate it would be to have to live with such symptoms (pity). Pity and fear are obviously emotional reactions and the decision to coerce or segregate an individual with mental illness could be considered a cognitive decision affected by emotional reactions. It is likely that the desire to maintain distance from an individual with mental illness would be influenced by fear of the unknown and a sense of unpredictability.

Interactions

A significant interaction was found between history of violence and diagnostic information for the factor of anger. A simple main effect was found for diagnostic information in the no history of violence condition, but not the history of violence condition. This suggests that when a violent history was present the diagnostic information may have become less relevant in invoking an angry response. With no

history of violence participants indicated feeling more anger when given only symptoms or when given the symptoms and label, compared to when they were given only the label. Participants may have had a reduced reaction to the label only because they were not fully aware of the symptoms associated with schizophrenia, but when they were given the symptoms they saw the vignette character in a more negative way due to the nature of the symptoms described. However, when a history of violence was presented, the insignificant difference in results suggests that participants felt an equal level of anger no matter which diagnostic information they were presented.

Hypothesis V: The Effect of Familiarity with Mental Illness

Contrary to previous research, this study did not find that the use of participants' familiarity with mental illness as a covariate had a strong impact on the study's outcome. One significant finding was affected by the use of familiarity as a covariate: the addition of a main effect of diagnostic information on anger. Participants' prior experiences with individuals with mental illness may place their negative feelings into a sharper contrast resulting in more clear distinction between those who feel anger towards the character in the vignette and those who do not. Unlike a study by Corrigan (2003), the present study did not find familiarity with mental illness to moderate either a need for social distance or the endorsement of coercion and segregation.

Participants who were more familiar with mental illness were hypothesized to be more likely to endorse positive attributions about an individual with mental illness and less likely to endorse negative attributions about him. This anticipated effect was found to some degree in the present study. A significant, negative correlation was

found between the level-of-contact report and fear. There were also significant, modest, negative correlations found between scores on the familiarity question and the following factors: personal responsibility, anger, and fear. Finally, there was a significant, but modest positive correlation between scores on the familiarity question and the likelihood of helping. The presence of a significant correlation between the level-of-contact report and the attribution factors is similar to the findings of Corrigan (2003) who used his own modified version of the report. In his study, Corrigan found that familiarity was positively correlated with feelings of pity and negatively correlated with feelings of anger and fear. The present study was also similar to prior research by Holmes et al. (1999), which found an inverse relationship between familiarity with mental illness and prejudicial attitudes toward individuals with mental illness.

Several reasons might account for the fact that familiarity with mental illness did not have a greater impact on participants' responses. Participants may not have associated the character of David with the individuals with mental illness with whom they are personally familiar. The David character was a sketchy description in a vignette rather than an actual person. If participants were placed in a live situation with an individual said to have a mental illness, their prior experiences may have had a greater impact. Additionally, participants may have been familiar with people with mental illnesses other than schizophrenia. Although participants may be empathic towards the mental illnesses with which they are familiar, they may still retain a negative view of schizophrenia. Finally, the variables manipulated in the vignettes

may have been too obvious as to their intent, and participants responded as they thought they were "supposed" to, rather than relying on their own personal judgment.

Schizophrenia Knowledge Question

The participants were asked an open-ended question as to what common problems and symptoms they associated with schizophrenia. Some of their responses reflected actual symptoms associated with schizophrenia (e.g., hallucinations, paranoia, and delusions); however, 28.05% of the participants also associated multiple or split personalities with the diagnosis of schizophrenia. Finally, a notable percentage (18.33%) believed schizophrenia was characterized by violent or aggressive behavior. This data suggests that although many of participants are aware of the symptoms associated with schizophrenia, many other individuals either attributed the symptoms of other mental disorders to schizophrenia or mixed both actual and false symptoms in their descriptions. The participants' inaccurate understanding of schizophrenia may have increased their negative emotional reactions and attributions toward an individual with mental illness, especially if they believe that individuals with schizophrenia are typically violent and have little control over their own actions. The impact of participant knowledge would likely have the greatest effect on participants given the label only condition as they would not have been given knowledge of the individual's symptoms. Though one would expect that participants with a warped knowledge of schizophrenia would react with more fear and anger toward the label only vignette, due to the tendency to react negatively to the unknown, this was not the case. As suggested above, this lack of a negative reaction may be due to social desirability factors which induced participants to react in a more open and

affirming manner toward the individual with mental illness. This serves as evidence that greater education about mental illness is required to give the general populace a clearer understanding of the symptoms associated with various mental disorders. Along these lines, however, participants' responses to the open-ended question about schizophrenia may have been affected by reading the vignettes before making their responses. To clarify the impact of reading the vignettes, future studies should control for the order of either answering the question before being exposed to any other information or answering the question after being exposed to the presentation.

Limitations and Future Research

Some limitations must be considered concerning the design of the present study. One possible limitation is that the project title was listed on the website that recruited participants as "An Evaluation of an Individual with Mental Illness." This resulted in some confusion as to the qualifications required to participate in the study and may have affected participants preconceptions of the study. The present study also lacked a representative sample of the general population. The participants were all drawn from first year students at a private midwestern college and their backgrounds were not representative of the population as whole. They are generally younger, better educated, and have better educated parents than members of the general population. Therefore, the findings of this study may not generalize to the general populace. Also, although the overall size of the sample was large, the number of the participants assigned to each vignette was relatively small. Future studies would be improved by having a greater sample size for each condition.

Although the internal consistency was good for the factors of the attribution questionnaire, a greater variety of information may be achieved in future studies by increasing the number of questions that represent each factor. This may be especially true for factors such as anger where participants may have interpreted the different questions (aggravated, angry, and irritated) as being more similar then was intended by the author. Other less direct questions assessing participants' emotional reactions may give a clearer picture of their feelings toward the character in the vignette. For example, participants could be asked if they would walk on the other side of the street if an individual talking to himself was approaching them. This would gauge the emotion of fear without directly asking if the participant felt afraid. Another question relates to the placement of the open-ended question about schizophrenia after the vignette. As mentioned earlier, further study would be required to determine what impact the information contained within the vignette had on participants' descriptions of the symptoms and problems associated with schizophrenia.

Another limitation of this study is that the participants self-reported on their reactions to a character described in a vignette. For clarity's sake the descriptions in the vignette did not stray far from the variables they were intended to represent. This may have resulted in a lack of depth in the character's description, which as a consequence may have reduced the participants' empathic feelings toward the character. More salient responses may also have been gleaned by having participants respond to either an actual individual with mental illness (i.e. videotaped) or an actor portraying such an individual.

An area of research that should be explored in the future would be the attributions that individuals with a mental illness make about themselves, others with mental illness, and those individuals who stigmatize them. While previous studies have examined the detrimental effect of stigma on the socioeconomic status and mental health of individuals with mental illness, this proposed line of research would explore the cognitive and emotional impact of stigma on individuals with mental illness. Furthermore, the impact that these thoughts and feelings have on these individuals' interactions with society at large could be investigated.

Some of this study's hypotheses were supported by the results, such as the negative impact of a history of violence and a negative reaction towards an individual who seemed to have caused his own illness. However, certain hypotheses were not supported. There was not a significant difference between participants' responses to a bio-genetic cause and to an automobile accident cause. Also, contrary to past research, the impact of familiarity with individuals with mental illness was found to be negligible in the present study. Overall, the present study suggests that more education is needed to increase the public's understanding of schizophrenia and to reduce the stigma that individuals with schizophrenia face in their lives. If the public believes that people with schizophrenia are dangerous individuals who have caused their own mental illness, then they will continue to make negative attributions about, and have negative reactions to, people with schizophrenia.

APPENDIX A

Vignettes

Vignette #1 (label / automobile accident / history of violence)

David is a 30-year-old single man who has schizophrenia. David developed schizophrenia following a severe automobile accident. In the past David was hospitalized for a short period of time at a local psychiatric hospital. David currently works for a large paper manufacturing company. David recently struck and injured one of his co-workers without provocation.

Vignette #2 (label / automobile accident / no history of violence)

David is a 30-year-old single man who has schizophrenia. David developed schizophrenia following a severe automobile accident. In the past David was hospitalized for a short period of time at a local psychiatric hospital. David currently works for a large paper manufacturing company. David has never committed a violent act.

Vignette #3 (label / cocaine / history of violence)

David is a 30-year-old single man who has schizophrenia. David developed schizophrenia following years of abusing cocaine. In the past David was hospitalized for a short period of time at a local psychiatric hospital. David currently works for a large paper manufacturing company. David recently struck and injured one of his co-workers without provocation.

Vignette #4 (label / cocaine / no history of violence)

David is a 30-year-old single man who has schizophrenia. David developed schizophrenia following years of abusing cocaine. In the past David was hospitalized for a short period of time at a local psychiatric hospital. David currently works for a large paper manufacturing company. David has never committed a violent act.

Vignette #5 (label / bio-genetic / history of violence)

David is a 30-year-old single man who has schizophrenia. David developed schizophrenia as the result of a genetic disorder that he inherited from his parents. In the past David was hospitalized for a short period of time at a local psychiatric hospital. David currently works for a large paper manufacturing company. David recently struck and injured one of his co-workers without provocation.

Vignette #6 (label / bio-genetic / no history of violence)

David is a 30-year-old single man who has schizophrenia. David developed schizophrenia as the result of a genetic disorder that he inherited from his parents. In the past David was hospitalized for a short period of time at a local psychiatric hospital. David currently works for a large paper manufacturing company. David has never committed a violent act.

Vignette #7 (symptoms / automobile accident / history of violence)

David is a 30-year-old single man who hears voices that others do not hear. David also believes that his co-workers secretly plot against him and that others are capable of reading his thoughts. David developed his symptoms following a severe automobile accident. In the past David was hospitalized for a short period of time at a local psychiatric hospital. David currently works for a large paper manufacturing company. David recently struck and injured one of his co-workers without provocation.

Vignette #8 (symptoms / automobile accident / no history of violence)

David is a 30-year-old single man who hears voices that others do not hear. David also believes that his co-workers secretly plot against him and that others are capable of reading his thoughts. David developed his symptoms following a severe automobile accident. In the past David was hospitalized for a short period of time at a local psychiatric hospital. David currently works for a large paper manufacturing company. David has never committed a violent act.

Vignette #9 (symptoms / cocaine / history of violence)

David is a 30-year-old single man who hears voices that others do not hear. David also believes that his co-workers secretly plot against him and that others are capable of reading his thoughts. David developed his symptoms following years of abusing cocaine. In the past David was hospitalized for a short period of time at a local psychiatric hospital. David currently works for a large paper manufacturing company. David recently struck and injured one of his co-workers without provocation.

Vignette #10 (symptoms / cocaine / no history of violence)

David is a 30-year-old single man who hears voices that others do not hear. David also believes that his co-workers secretly plot against him and that others are capable of reading his thoughts. David developed his symptoms following years of abusing cocaine. In the past David was hospitalized for a short period of time at a local psychiatric hospital. David currently works for a large paper manufacturing company. David has never committed a violent act.

Vignette #11 (symptoms / bio-genetic / history of violence)

David is a 30-year-old single man who hears voices that others do not hear. David also believes that his co-workers secretly plot against him and that others are capable of reading his thoughts. David developed his symptoms as the result of a genetic disorder that he inherited from his parents. In the past David was hospitalized for a short period of time at a local psychiatric hospital. David currently works for a large paper manufacturing company. David recently struck and injured one of his co-workers without provocation.

Vignette #12 (symptoms / bio-genetic / no history of violence)

David is a 30-year-old single man who hears voices that others do not hear. David also believes that his co-workers secretly plot against him and that others are capable of reading his thoughts. David developed his symptoms as the result of a genetic disorder that he inherited from his parents. In the past David was hospitalized for a short period of time at a local psychiatric hospital. David currently works for a large paper manufacturing company. David has never committed a violent act.

Vignette #13 (label and symptoms / automobile accident / history of violence)

David is a 30-year-old single man who has schizophrenia. He hears voices that others do not hear. David also believes that his co-workers secretly plot against him and that others are capable of reading his thoughts. David developed schizophrenia following a severe automobile accident. In the past David was hospitalized for a short period of time at a local psychiatric hospital. David currently works for a large paper manufacturing company. David recently struck and injured one of his co-workers without provocation.

Vignette #14 (label and symptoms / automobile accident / no history of violence)

David is a 30-year-old single man who has schizophrenia. He hears voices that others do not hear. David also believes that his co-workers secretly plot against him and that others are capable of reading his thoughts. David developed schizophrenia following a severe automobile accident. In the past David was hospitalized for a short period of time at a local psychiatric hospital. David currently works for a large paper manufacturing company. David has never committed a violent act.

Vignette #15 (label and symptoms / cocaine / history of violence)

David is a 30-year-old single man who has schizophrenia. He hears voices that others do not hear. David also believes that his co-workers secretly plot against him and that others are capable of reading his thoughts. David developed schizophrenia following years of abusing cocaine. In the past David was hospitalized for a short period of time at a local psychiatric hospital. David currently works for a large paper manufacturing company. David recently struck and injured one of his co-workers without provocation.

Vignette #16 (label and symptoms / cocaine / no history of violence)

David is a 30-year-old single man who has schizophrenia. He hears voices that others do not hear. David also believes that his co-workers secretly plot against him and that others are capable of reading his thoughts. David developed schizophrenia following years of abusing cocaine. In the past David was hospitalized for a short period of time at a local psychiatric hospital. David currently works for a large paper manufacturing company. David has never committed a violent act.

Vignette #17 (label and symptoms / bio-genetic / history of violence)

David is a 30-year-old single man who has schizophrenia. He hears voices that others do not hear. David also believes that his co-workers secretly plot against him and that others are capable of reading his thoughts. David developed schizophrenia as the result of a genetic disorder that he inherited from his parents. In the past David was hospitalized for a short period of time at a local psychiatric hospital. David currently works for a large paper manufacturing company. David recently struck and injured one of his co-workers without provocation.

Vignette #18 (label and symptoms / bio-genetic / no history of violence)

David is a 30-year-old single man who has schizophrenia. He hears voices that others do not hear. David also believes that his co-workers secretly plot against him and that others are capable of reading his thoughts. David developed schizophrenia as the result of a genetic disorder that he inherited from his parents. In the past David was hospitalized for a short period of time at a local psychiatric hospital. David currently works for a large paper manufacturing company. David has never committed a violent act.

APPENDIX B

Demographic Questionnaire

Directions: Please respond to each of the following questions about your background.

1. What is your age? _____

2. What is your gender?

    a. Male

    b. Female

3. What is your ethnicity?

    a. African-American

    b. Latino

    c. Asian/Pacific Islander

    d. Alaskan/Native American

    e. White/Caucasian

    f. Other _____

4. What is your marital status?

    a. Married

    b. Single

    c. Divorced

5. Which year are you in college?

    a. First Year

    b. Sophomore

    c. Junior

    d. Senior

6. What is your father's highest level of education?

    a. High school/GED

    b. Some college

    c. Associate's degree

    d. Bachelor's degree

    e. Ph.D./Medical/Professional degree

7. What is your mother's highest level of education?

    a. High school/GED

    b. Some college

    c. Associate's degree

    d. Bachelor's degree

    e. Ph.D./Medical/Professional degree

APPENDIX C

Level-of-Contact Report

Directions: Please read each of the following statements carefully. Please check all situations on the list that you have experienced in your lifetime involving persons with severe mental illness.

_____ 1. I have watched a movie or television show in which a character depicted a person with mental illness.

_____ 2. My job, past or present, involves providing clinical treatment for persons with a severe mental illness.

_____ 3. I have observed, in passing, a person I believe may have had a severe mental illness.

_____ 4. I have observed persons with a severe mental illness on a frequent basis.

_____ 5. I have a severe mental illness.

_____ 6. I have worked with a person who had a severe mental illness at my place of employment.

_____ 7. I have an immediate family member (i.e., father, mother, sibling) who has a severe mental illness.

_____ 8. I have never observed a person that I was aware had a severe mental illness.

_____ 9. My job, past or present, includes providing services, not including clinical treatment, to persons with a severe mental illness.

_____ 10. A friend of the family has a severe mental illness.

_____ 11. I have a relative who has a severe mental illness.

_____ 12. I have watched a documentary on the television about severe mental illness.

_____ 13. I live with a person who has a severe mental illness.

Given my past experiences I would giving the following rating to my level of familiarity with persons with mental illness:

1	2	3	4	5	6	7	8	9	10
No personal contact whatsoever								Very close personal contact	

Note: The rank order of the questions listed above from least intimate situation involving an individual with mental illness to the most intimate situation involving an individual with mental illness is: 8, 3, 1, 12, 4, 6, 9, 2, 10, 11, 7, 13, 5,

APPENDIX D

Attribution Questionnaire

Directions: Please read the following paragraph about a man named David. After reading the paragraph, select the extent that you agree with each of the following statements. Choose your answers thoughtfully and respond to the questions based on your own thoughts and feelings not what you think "most people" would say or do.

(A vignette from Appendix A will be inserted here)

For each question choose from the following alternatives:

6. Strongly Agree
5. Mostly Agree
4. Somewhat Agree
3. Somewhat Disagree
2. Mostly Disagree
1. Strongly Disagree

Personal Responsibility Beliefs

1. David's present condition is his own fault.

   1 2 3 4 5 6

2. The cause of David's present condition is under his control.

   1 2 3 4 5 6

3. David is responsible for his present condition.

   1 2 3 4 5 6

Emotional Responses

Pity

4. I would feel pity for David.

1 2 3 4 5 6

5. I would feel sympathy for David.

1 2 3 4 5 6

6. I would feel concerned for David.

1 2 3 4 5 6

Anger

7. I would feel aggravated with David.

1 2 3 4 5 6

8. I would feel angry with David.

1 2 3 4 5 6

9. I would feel irritated with David.

1 2 3 4 5 6

Fear

10. I would feel David is dangerous.

1 2 3 4 5 6

11. I would feel threatened by David.

1 2 3 4 5 6

12. I would feel afraid of David.

1 2 3 4 5 6

Helping and Rejecting Responses

Helping

13. If I were an employer, I would hire David for a job.

1 2 3 4 5 6

14. I would share a car pool with David each day.

1 2 3 4 5 6

15. If David needed assistance, I would help David.

1 2 3 4 5 6

16. If I were a landlord, I would rent an apartment to David.

1 2 3 4 5 6

Coercion-Segregation

17. David poses a risk to his neighbors and he should be hospitalized.

1 2 3 4 5 6

18. It would be best for David's community if he were admitted to a psychiatric hospital.

1 2 3 4 5 6

19. If I were in charge of David's treatment, I would admit him to a group home.

1 2 3 4 5 6

20. It would be best for David if he were admitted to a psychiatric hospital

1 2 3 4 5 6

APPENDIX E

Attribution Questionnaire (Participant)

Directions: Please read the following paragraph about a man named David. After reading the paragraph select the extent that you agree with each of the following statements. Choose your answers thoughtfully and respond to the questions based on your own thoughts and feelings not what you think "most people" would say or do.

(A vignette from Appendix A will be inserted here)

	Strongly Agree	Mostly Agree	Somewhat Agree	Somewhat Disagree	Mostly Disagree	Strongly Disagree
1. David's present condition is his own fault.						
2. It would be best for David if he were admitted to a psychiatric hospital.						
3. I would feel pity for David.						
4. I would feel aggravated with David.						
5. I would feel David is dangerous.						
6. If I were an employer, I would hire David for a job.						
7. David poses a risk to his neighbors and he should be hospitalized.						
8. The cause of David's present condition is under his control.						
9. If I were a landlord, I would rent an apartment to David.						
10. I would feel sympathy for David.						
11. I would feel angry with David.						
12. I would feel threatened by David.						
13. I would share a car pool with David each day.						
14. It would be best for David's community if he were admitted to a psychiatric hospital.						
15. David is responsible for his present condition.						
16. I would feel concerned for David.						

	Strongly Agree	Mostly Agree	Somewhat Agree	Somewhat Disagree	Mostly Disagree	Strongly Disagree
17. I would feel irritated with David.						
18. I would feel afraid of David.						
19. If David needed assistance, I would help David.						
20. If I were in charge of David's treatment, I would admit him to a group home.						

APPENDIX F

Schizophrenia Knowledge Question

Directions: Below please list the common problems and symptoms that you associate with schizophrenia.

APPENDIX G

Table 10

Analysis of Variance for Personal Responsibility Beliefs

Source	*df*	*F*	*n*	*p*
Violence (V)	1	1.07	360	.302
Controllability (C)	2	159.13	360	.001
Diagnostic (D)	2	1.05	360	.351
V X C	2	1.51	360	.221
V X D	2	1.27	360	.282
C X D	4	0.90	360	.467
V X C X D	4	1.15	360	.332

Table 11

Analysis of Variance for Pity

Source	*df*	*F*	*n*	*p*
Violence (V)	1	1.25	360	.265
Controllability (C)	2	6.18	360	.002
Diagnostic (D)	2	3.44	360	.033
V X C	2	0.88	360	.415
V X D	2	0.42	360	.660
C X D	4	1.35	360	.252
V X C X D	4	1.36	360	.249

Table 12

Analysis of Variance for Anger

Source	*df*	*F*	*n*	*p*
Violence (V)	1	20.63	360	.001
Controllability (C)	2	12.07	360	.001
Diagnostic (D)	2	2.93	360	.055
V X C	2	0.62	360	.539
V X D	2	3.73	360	.025
C X D	4	1.87	360	.116
V X C X D	4	0.48	360	.750

Table 13

Analysis of Variance for Fear

Source	*df*	*F*	*n*	*p*
Violence (V)	1	92.35	360	.000
Controllability (C)	2	8.01	360	.000
Diagnostic (D)	2	5.60	360	.004
V X C	2	0.26	360	.768
V X D	2	0.66	360	.517
C X D	4	0.33	360	.855
V X C X D	4	0.85	360	.495

Table 14

Analysis of Variance for Likelihood of Helping

Source	*df*	*F*	*n*	*p*
Violence (V)	1	44.50	360	.000
Controllability (C)	2	17.39	360	.000
Diagnostic (D)	2	3.20	360	.042
V X C	2	0.15	360	.862
V X D	2	0.86	360	.425
C X D	4	0.39	360	.817
V X C X D	4	1.96	360	.101

Table 15

Analysis of Variance for Coercion-Segregation

Source	*df*	*F*	*n*	*p*
Violence (V)	1	103.34	360	.000
Controllability (C)	2	11.36	360	.000
Diagnostic (D)	2	10.99	360	.000
V X C	2	0.42	360	.657
V X D	2	1.36	360	.258
C X D	4	0.80	360	.529
V X C X D	4	1.32	360	.262

APPENDIX H

Table 16

Means and Standard Deviations for Personal Responsibility Beliefs

Violence	Controllability	Diagnostic	*M*	*SD*	*n*
Low	Bio-genetic	Label Only (L)	1.60	0.67	20
		Symptoms (S)	1.80	0.88	20
		L + S	1.93	1.04	20
		Total	1.78	0.87	60
	Auto	Label Only (L)	2.00	0.87	20
		Symptoms (S)	1.87	0.85	20
		L + S	1.70	0.94	20
		Total	1.86	0.88	60
	Drug Abuse	Label Only (L)	3.48	1.42	20
		Symptoms (S)	3.72	1.14	20
		L + S	3.38	0.96	20
		Total	3.53	1.17	60
	Total	Label Only (L)	2.36	1.31	60
		Symptoms (S)	2.46	1.30	60
		L + S	2.34	1.22	60
		Total	2.39	1.27	180

High	Bio-genetic	Label Only (L)	1.98	0.87	20
		Symptoms (S)	1.75	0.77	20
		L + S	1.50	0.60	20
		Total	1.74	0.77	60
	Auto	Label Only (L)	1.98	0.77	20
		Symptoms (S)	1.55	0.66	20
		L + S	2.02	0.92	20
		Total	1.85	0.81	60
	Drug Abuse	Label Only (L)	4.10	1.20	20
		Symptoms (S)	3.98	1.09	20
		L + S	3.55	1.10	20
		Total	3.88	1.14	60
	Total	Label Only (L)	2.69	1.38	60
		Symptoms (S)	2.43	1.40	60
		L + S	2.36	1.25	60
		Total	2.49	1.34	120

Total	Bio-genetic	Label Only (L)	1.79	0.79	40
		Symptoms (S)	1.78	0.82	40
		L + S	1.72	0.86	40
		Total	1.76	0.82	120
	Auto	Label Only (L)	1.99	0.81	40
		Symptoms (S)	1.71	0.77	40
		L + S	1.86	0.93	40
		Total	1.85	0.84	120
	Drug Abuse	Label Only (L)	3.79	1.33	40
		Symptoms (S)	3.85	1.11	40
		L + S	3.47	1.02	40
		Total	3.70	1.17	120
	Total	Label Only (L)	2.53	1.35	120
		Symptoms (S)	2.44	1.35	120
		L + S	2.35	1.23	120
		Total	2.44	1.31	360

Table 17

Means and Standard Deviations for Pity

Violence	Controllability	Diagnostic	*M*	*SD*	*n*
Low	Bio-genetic	Label Only (L)	4.22	0.96	20
		Symptoms (S)	4.82	0.94	20
		L + S	4.70	0.86	20
		Total	4.58	0.94	60
	Auto	Label Only (L)	4.55	1.08	20
		Symptoms (S)	4.67	0.91	20
		L + S	4.83	0.81	20
		Total	4.68	0.93	60
	Drug Abuse	Label Only (L)	4.30	0.93	20
		Symptoms (S)	4.58	0.95	20
		L + S	4.38	0.91	20
		Total	4.42	0.92	60
	Total	Label Only (L)	4.36	0.98	60
		Symptoms (S)	4.69	0.92	60
		L + S	4.64	0.86	60
		Total	4.56	0.93	180

High	Bio-genetic	Label Only (L)	4.52	0.78	20
		Symptoms (S)	4.85	0.81	20
		L + S	5.03	0.56	20
		Total	4.80	0.74	60
	Auto	Label Only (L)	4.65	0.71	20
		Symptoms (S)	5.20	0.65	20
		L + S	4.62	0.84	20
		Total	4.82	0.78	60
	Drug Abuse	Label Only (L)	4.50	0.74	20
		Symptoms (S)	4.32	0.98	20
		L + S	4.27	0.71	20
		Total	4.36	0.81	60
	Total	Label Only (L)	4.56	0.73	60
		Symptoms (S)	4.79	0.89	60
		L + S	4.64	0.77	60
		Total	4.66	0.80	120

Total	Bio-genetic	Label Only (L)	4.37	0.87	40
		Symptoms (S)	4.83	0.87	40
		L + S	4.87	0.73	40
		Total	4.69	0.85	120
	Auto	Label Only (L)	4.60	0.90	40
		Symptoms (S)	4.93	0.83	40
		L + S	4.73	0.82	40
		Total	4.75	0.86	120
	Drug Abuse	Label Only (L)	4.40	0.83	40
		Symptoms (S)	4.45	0.96	40
		L + S	4.32	0.80	40
		Total	4.39	0.86	120
	Total	Label Only (L)	4.46	0.87	120
		Symptoms (S)	4.74	0.90	120
		L + S	4.64	0.81	120
		Total	4.61	0.87	360

Table 18

Means and Standard Deviations for Anger

Violence	Controllability	Diagnostic	*M*	*SD*	*n*
Low	Bio-genetic	Label Only (L)	2.52	1.13	20
		Symptoms (S)	2.80	0.99	20
		L + S	2.77	0.73	20
		Total	2.69	0.96	60
	Auto	Label Only (L)	1.95	1.11	20
		Symptoms (S)	2.73	1.01	20
		L + S	3.13	0.96	20
		Total	2.60	1.13	60
	Drug Abuse	Label Only (L)	2.82	0.95	20
		Symptoms (S)	3.35	1.13	20
		L + S	3.12	1.09	20
		Total	3.09	1.06	60
	Total	Label Only (L)	2.43	1.11	60
		Symptoms (S)	2.96	1.06	60
		L + S	3.01	0.94	60
		Total	2.80	1.07	18

High	Bio-genetic	Label Only (L)	3.18	1.06	20
		Symptoms (S)	2.82	0.89	20
		L + S	3.02	0.85	20
		Total	3.01	0.94	60
	Auto	Label Only (L)	2.93	0.95	20
		Symptoms (S)	3.27	0.95	20
		L + S	3.12	0.77	20
		Total	3.11	0.89	60
	Drug Abuse	Label Only (L)	3.73	0.67	20
		Symptoms (S)	3.77	0.97	20
		L + S	3.53	1.08	20
		Total	3.68	0.91	60
	Total	Label Only (L)	3.28	0.96	60
		Symptoms (S)	3.28	1.00	60
		L + S	3.22	0.92	60
		Total	3.26	0.96	120

Total	Bio-genetic	Label Only (L)	2.85	1.13	40
		Symptoms (S)	2.81	0.93	40
		L + S	2.89	0.80	40
		Total	2.85	0.96	120
	Auto	Label Only (L)	2.44	1.14	40
		Symptoms (S)	3.00	1.00	40
		L + S	3.13	0.86	40
		Total	2.86	1.04	120
	Drug Abuse	Label Only (L)	3.28	0.93	40
		Symptoms (S)	3.56	1.06	40
		L + S	3.32	1.09	40
		Total	3.39	1.03	120
	Total	Label Only (L)	2.86	1.12	120
		Symptoms (S)	3.12	1.04	120
		L + S	3.11	0.94	120
		Total	3.03	1.04	360

Table 19

Means and Standard Deviations for Fear

Violence	Controllability	Diagnostic	*M*	*SD*	*n*
Low	Bio-genetic	Label Only (L)	2.43	1.15	20
		Symptoms (S)	2.37	0.78	20
		L + S	2.78	0.77	20
		Total	2.53	0.92	60
	Auto	Label Only (L)	2.37	0.89	20
		Symptoms (S)	3.00	1.01	20
		L + S	2.82	1.26	20
		Total	2.73	1.08	60
	Drug Abuse	Label Only (L)	2.65	1.00	20
		Symptoms (S)	3.28	1.12	20
		L + S	3.25	1.01	20
		Total	3.06	1.07	60
	Total	Label Only (L)	2.48	1.01	60
		Symptoms (S)	2.88	1.04	60
		L + S	2.95	1.04	60
		Total	2.77	1.04	180

High	Bio-genetic	Label Only (L)	3.33	1.24	20
		Symptoms (S)	3.62	0.84	20
		L + S	3.85	0.81	20
		Total	3.60	0.99	60
	Auto	Label Only (L)	3.48	0.88	20
		Symptoms (S)	3.60	0.74	20
		L + S	3.78	0.55	20
		Total	3.62	0.73	60
	Drug Abuse	Label Only (L)	3.95	1.06	20
		Symptoms (S)	3.90	0.73	20
		L + S	4.20	1.10	20
		Total	4.02	0.97	60
	Total	Label Only (L)	3.59	1.09	60
		Symptoms (S)	3.71	0.77	60
		L + S	3.94	0.86	60
		Total	3.75	0.92	120

Total	Bio-genetic	Label Only (L)	2.88	1.27	40
		Symptoms (S)	2.99	1.02	40
		L + S	3.32	0.95	40
		Total	3.06	1.10	120
	Auto	Label Only (L)	2.93	1.04	40
		Symptoms (S)	3.30	0.93	40
		L + S	3.30	1.08	40
		Total	3.18	1.02	120
	Drug Abuse	Label Only (L)	3.30	1.21	40
		Symptoms (S)	3.59	0.99	40
		L + S	3.73	1.15	40
		Total	3.54	1.12	120
	Total	Label Only (L)	3.04	1.18	120
		Symptoms (S)	3.29	1.00	120
		L + S	3.45	1.07	120
		Total	3.26	1.10	360

Table 20

Means and Standard Deviations for Likelihood of Helping

Violence	Controllability	Diagnostic	*M*	*SD*	*n*
Low	Bio-genetic	Label Only (L)	4.23	0.77	20
		Symptoms (S)	4.28	0.49	20
		L + S	4.16	0.85	20
		Total	4.22	0.71	60
	Auto	Label Only (L)	4.79	0.66	20
		Symptoms (S)	4.10	0.65	20
		L + S	4.21	0.84	20
		Total	4.37	0.77	60
	Drug Abuse	Label Only (L)	4.01	0.80	20
		Symptoms (S)	3.66	0.92	20
		L + S	3.80	0.79	20
		Total	3.83	0.84	60
	Total	Label Only (L)	4.34	0.80	60
		Symptoms (S)	4.01	0.74	60
		L + S	4.06	0.83	60
		Total	4.14	0.80	180

High	Bio-genetic	Label Only (L)	4.04	0.55	20
		Symptoms (S)	3.64	0.80	20
		L + S	3.60	0.73	20
		Total	3.76	0.72	60
	Auto	Label Only (L)	3.80	0.69	20
		Symptoms (S)	3.90	0.71	20
		L + S	3.71	0.79	20
		Total	3.80	0.72	60
	Drug Abuse	Label Only (L)	3.24	0.69	20
		Symptoms (S)	3.30	0.77	20
		L + S	3.33	0.71	20
		Total	3.29	0.71	60
	Total	Label Only (L)	3.69	0.72	60
		Symptoms (S)	3.61	0.79	60
		L + S	3.55	0.75	60
		Total	3.62	0.75	120

Total	Bio-genetic	Label Only (L)	4.13	0.67	40
		Symptoms (S)	3.96	0.73	40
		L + S	3.88	0.83	40
		Total	3.99	0.75	120
	Auto	Label Only (L)	4.29	0.83	40
		Symptoms (S)	4.00	0.68	40
		L + S	3.96	0.84	40
		Total	4.09	0.79	120
	Drug Abuse	Label Only (L)	3.63	0.84	40
		Symptoms (S)	3.48	0.85	40
		L + S	3.56	0.78	40
		Total	3.56	0.82	120
	Total	Label Only (L)	4.02	0.83	120
		Symptoms (S)	3.81	0.79	120
		L + S	3.80	0.83	120
		Total	3.88	0.82	360

Table 21

Means and Standard Deviations for Coercion-Segregation

Violence	Controllability	Diagnostic	*M*	*SD*	*n*
Low	Bio-genetic	Label Only (L)	2.36	0.79	20
		Symptoms (S)	3.18	0.83	20
		L + S	2.86	1.10	20
		Total	2.80	0.96	60
	Auto	Label Only (L)	2.10	0.83	20
		Symptoms (S)	2.83	0.72	20
		L + S	2.69	1.08	20
		Total	2.54	0.93	60
	Drug Abuse	Label Only (L)	2.86	1.08	20
		Symptoms (S)	3.55	0.89	20
		L + S	3.04	0.77	20
		Total	3.15	0.96	60
	Total	Label Only (L)	2.44	0.95	60
		Symptoms (S)	3.18	0.86	60
		L + S	2.86	0.99	60
		Total	2.83	0.98	180

High	Bio-genetic	Label Only (L)	3.29	0.77	20
		Symptoms (S)	3.75	1.02	20
		L + S	4.00	0.75	20
		Total	3.68	0.89	60
	Auto	Label Only (L)	3.61	1.04	20
		Symptoms (S)	3.94	0.90	20
		L + S	3.34	0.83	20
		Total	3.63	0.94	60
	Drug Abuse	Label Only (L)	3.94	0.96	20
		Symptoms (S)	4.21	1.02	20
		L + S	4.16	0.84	20
		Total	4.10	0.94	60
	Total	Label Only (L)	3.61	0.95	60
		Symptoms (S)	3.97	0.98	60
		L + S	3.83	0.87	60
		Total	3.80	0.94	120

Total	Bio-genetic	Label Only (L)	2.83	0.90	40
		Symptoms (S)	3.46	0.96	40
		L + S	3.43	1.09	40
		Total	3.24	1.02	120
	Auto	Label Only (L)	2.86	1.20	40
		Symptoms (S)	3.38	0.98	40
		L + S	3.01	1.00	40
		Total	3.08	1.08	120
	Drug Abuse	Label Only (L)	3.40	1.15	40
		Symptoms (S)	3.88	1.01	40
		L + S	3.60	0.98	40
		Total	3.63	1.06	120
	Total	Label Only (L)	3.03	1.12	120
		Symptoms (S)	3.58	1.00	120
		L + S	3.35	1.05	120
		Total	3.32	1.08	360

APPENDIX I

Table 22

Analysis of Co-variance for Personal Responsibility Beliefs

Source	*df*	*F*	*n*	*p*
Violence (V)	1	0.58	360	.445
Controllability (C)	2	158.66	360	.000
Diagnostic (D)	2	1.08	360	.341
V X C	2	1.78	360	.169
V X D	2	0.79	360	.455
C X D	4	0.77	360	.543
V X C X D	4	1.12	360	.345

Table 23

Analysis of Co-variance for Pity

Source	*df*	*F*	*n*	*p*
		Between subjects		
Violence (V)	1	1.44	360	.230
Controllability (C)	2	6.00	360	.003
Diagnostic (D)	2	3.38	360	.035
V X C	2	0.95	360	.389
V X D	2	0.51	360	.599
C X D	4	1.38	360	.240
V X C X D	4	1.29	360	.273

Table 24

Analysis of Co-variance for Anger

Source	*df*	*F*	*n*	*p*
		Between subjects		
Violence (V)	1	20.10	360	.000
Controllability (C)	2	11.76	360	.000
Diagnostic (D)	2	3.49	360	.031
V X C	2	0.76	360	.466
V X D	2	3.25	360	.040
C X D	4	1.82	360	.124
V X C X D	4	0.55	360	.698

Table 25

Analysis of Co-variance for Fear

Source	*df*	*F*	*n*	*p*
		Between subjects		
Violence (V)	1	87.96	360	.000
Controllability (C)	2	7.82	360	.000
Diagnostic (D)	2	5.74	360	.004
V X C	2	0.20	360	.816
V X D	2	0.53	360	.590
C X D	4	0.39	360	.815
V X C X D	4	0.77	360	.544

Table 26

Analysis of Co-variance for Likelihood of Helping

Source	*df*	*F*	*n*	*p*
		Between subjects		
Violence (V)	1	41.62	360	.000
Controllability (C)	2	16.71	360	.000
Diagnostic (D)	2	3.46	360	.033
V X C	2	0.23	360	.795
V X D	2	0.63	360	.532
C X D	4	0.34	360	.849
V X C X D	4	1.85	360	.118

Table 27

Analysis of Co-variance for Coercion-Segregation

Source	*df*	*F*	*n*	*p*
		Between subjects		
Violence (V)	1	99.45	360	.000
Controllability (C)	2	11.02	360	.000
Diagnostic (D)	2	11.03	360	.000
V X C	2	0.44	360	.641
V X D	2	1.20	360	.301
C X D	4	0.76	360	.550
V X C X D	4	1.34	360	.256

APPENDIX J

Informed Consent to Participate in a Research Project

Project Title: "Evaluation of an Individual with Mental Illness"
Principal Investigator: Jacob Crouse

Description of Study: I understand that this study requires that I complete three questionnaires that will ask me about my past experiences with individuals who have a severe mental illness and my opinion of an individual described in a vignette.

Adverse Effects and Risks: Based on past research, there is little risk associated with completing these questionnaires. In the event that I am in need of counseling for any purpose, I am aware that I can contact the Counseling Center at 229-3341. I am also aware that services provided at the Counseling Center are free of charge to all University of Dayton undergraduate students.

Duration of Study: Participation will require one session of approximately 45 minutes, which corresponds to one research credit.

Confidentiality of Data: Neither my name nor any other identifying information will appear on my answer sheet. My responses to the questionnaires used in this study will be assigned a number. Therefore, my responses will not be identifiable by my name. All data will be stored in a locked filing cabinet.

Contact Person: If you have any questions concerning your participation in this study now or in the future, Jacob Crouse can be contacted by e-mail at ibis12181 @hotmail.com or at (717) 269-2302. Mr. Crouse's thesis chair, Dr. John Korte, can be reached at (937) 229-2169, by e-mail at john.korte@notes.udayton.edu, or at SJ 330. The chair of the Research Review and Ethics Committee, Dr. Greg Elvers, can be reached at (937) 229-2171, by e-mail at greg.elvers@ notes.udayton.edu, or at SJ 312.

Consent to Participate: I am voluntarily participating in this study. The investigator named above has adequately answered any and all questions I have about this study, the procedures involved, and about my participation. I understand that the investigator named above will be available to answer any questions about research procedures throughout this study. I also understand that I may voluntarily terminate my participation in this study at any time and still receive full credit. I also understand that the investigator named above may terminate my participation in this study if he feels this to be in my best interest. In addition, I certify that I am 18 (eighteen) years of age or older.

_____

Signature of Student Student's Name (printed) Date:

_____

Signature of Witness

APPENDIX K

The Effects of Dangerousness, Controllability of Cause, and Labeling on Attributions about Individuals with Mental Illness

Debriefing Sheet

Stigma has been shown to have a negative impact on the lives of those who suffer from mental illness. However, people who are more familiar with individuals who have a severe mental illness are more likely to react to them in a positive way. The intent of this study was to determine the effect that labeling, dangerousness, and cause of mental illness has on the way people respond to an individual with severe mental illness depending on their own familiarity with mental illness. It should be noted that in the descriptions of the cause of the individuals mental illness that neither the abuse of cocaine nor an automobile accident are considered valid causes of schizophrenia. Instead, they would be labeled as substance-induced psychotic disorder and psychotic disorder due to a general medical condition. The items in this study measured participants' beliefs, feelings, and likely behaviors towards a person with a mental illness. The future aim of this line of research is to discern what leads to both positive and negative thoughts, emotions, and behaviors toward individuals with mental illness.

Based on past research, there is little risk associated with completing these questionnaires. In the event that I am in need of counseling for any purpose, I am aware that I can contact the Counseling Center at 229-3341. I am also aware that services provided at the Counseling Center are free of charge to all University of Dayton undergraduate students.

If you have any questions concerning your participation in this study now or in the future, Jacob Crouse can be contacted by e-mail at ibis12181@hotmail.com or at (717) 269-2302. Mr. Crouse's thesis chair, Dr. John Korte, can be reached at (937) 229-2169, by e-mail at john.korte@notes.udayton.edu, or at St. Joseph's 330. The chair of the Research Review and Ethics Committee, Dr. Greg Elvers, can be reached at (937) 229-2171, by e-mail at greg.elvers@notes.udayton.edu, or at St. Joseph's 312

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