Fall 12-15-2011

Social Distance as a Function of Mental Health Status and Gender of College Student Peers

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Psychology

Submitted in Partial Fulfillment of the Requirements
For the Degree of Bachelor of Arts in Psychology
In the Honors Program at
Coastal Carolina University

December 2011

Abstract

The purpose of this study was to examine college students' general preference for social distance from individuals who have mental disorders, as well as their preference for social distance from a peer with a specific diagnostic label of Attention Deficit Hyperactivity Disorder (ADHD), Obsessive Compulsive Disorder (OCD), or a Stuttering Disorder. College students (N = 180) enrolled at a Southeastern liberal arts university completed the Modified Social Distance Scale which assessed general preference for social distance from people with mental disorders and subsequently read a short vignette describing a male or female college student who had been diagnosed with and treated for ADHD, OCD, or stuttering. Participants then completed a vignette survey, which assessed their preference for social distance from the stimulus person described in the vignette. The results of the study indicated that college students' general preference for distance from individuals with mental disorders was positively correlated with their preference for distance from a peer with a specific disorder. Additionally, the students preferred more social distance from a peer diagnosed with ADHD and OCD than a peer who stuttered. Gender of the stimulus person did not have a significant effect on students' social distance ratings nor was the interaction between diagnostic label and gender of stimulus person significant. These results suggest that college students are influenced by the stigma associated with mental disorders and prefer to maintain distance in social and academic settings from individuals labeled as having a mental disorder.

Keywords: social distance, academic distance, ADHD, OCD, stuttering

Social Distance as a Function of Mental Health Status and Gender of College Student Peers

Imagine being deemed an outsider because of a problem that cannot be controlled. Many people who live with mental disorders face this feeling every day. One of the most widely used classification systems for mental disorders is the Diagnostic and Statistical Manual of Mental Disorders 4th Edition Revised (DSM-IV-TR, American Psychiatric Association, 2000). Each mental disorder that is discussed in the DSM-IV-TR

> is conceptualized as a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and that is associated with present distress (e.g., a painful symptom) or disability (i.e., impairment in one or more important areas of functioning) or with a significantly increased risk of suffering death, pain, disability, or an important loss of freedom. In addition, this syndrome or pattern must not be merely an expectable and culturally sanctioned response to a particular event, for example, the death of a loved one. Whatever its original cause, it must currently be considered a manifestation of a behavioral, psychological, or biological dysfunction in the individual (American Psychiatric Association, 2000, p. xxxi).

While this operational definition has been developed fairly recently, views regarding the origins of mental disorders have varied widely throughout human history.

In ancient civilizations, individuals who suffered from mental disorders were considered to be "mad." The origin of madness in an individual was thought to be supernatural in nature and caused by demonic possession. During this time period, the treatments for such individuals included exorcisms and trephination. Trephination was a surgical procedure in which a hole was drilled into the skull of the afflicted individuals in an attempt to set free whatever demons were causing their symptoms (Conrad & Schneider, 2010). In the 4th century B.C., the Greek physician Hippocrates presented a different theory for the causation of mental disorders. Hippocrates theorized that mental disorders were caused by a biological imbalance of the four body humors; blood, phlegm, yellow bile, and black bile. Hippocrates proposed more humane

treatments than those used in earlier times and utilized natural healing treatments, such as rest, exercise, or a balanced diet. Following the collapse of the Western Roman Empire in the 5th century A.D., the theory of demonic possession returned. For the next ten centuries of the Dark Ages in Europe, individuals who showed signs of having a mental disorder were labeled as "heretics" or "witches" and "treatments" consisted of torture and execution to rid the body of the "demon" (Schultz & Schultz, 2004).

As the Dark Ages drew to a close, asylums began to be used to house the mentally ill. Conditions in these facilities were extremely poor. Inmates were often starved, chained to walls and even put on display for the amusement of the public (Schultz & Schultz, 2004). In the 18th and 19th centuries, reformers initiated a return to the biological model of mental illness. Living conditions for inmates in asylums began to improve and treatment techniques were developed to reduce the symptoms of what were thought to be biological disturbances. Dominant theories of mental illness changed again in the late 19th century. Sigmund Freud proposed his psychodynamic theory, which suggested that some mental disorders were psychological in nature and a product of unresolved, unconscious childhood conflict. Over the next hundred years, research stimulated by both biological and psychological theories greatly advanced the understanding of causes of mental disorders and contributed to the development of many new treatment techniques.

In spite of the advances in knowledge, treatment, and efforts to educate the general public about mental illness, having a mental disorder still carries with it a negative stigma. The stigma, or the "social mark that leads to discrediting of members of a group" (Boysen & Vogel, 2008, p. 447), associated with mental disorders greatly impacts the lives of individuals who suffer from them. According to Martinez, Piff, Mendoza-Denton, and Hinshaw (2011), "people with mental

illness labels belong to an extremely devalued social category" (p. 3). Past research has shown that the general public clings to negative stereotypes regarding individuals with mental disorders. Phelan and Basow (2007) conducted a study concerning the effects of being labeled because of a mental disorder. Undergraduate college students read randomly assigned vignettes describing a stimulus person who was either an alcoholic, or was experiencing major depression, or was experiencing the normal stresses of life. The order of the vignettes varied for each participant. After reading the vignettes, each participant responded to survey questions which measured their desire for social distance from the stimulus person, how dangerous they perceived the stimulus person to be, and their tendency to label the stimulus person as having a mental illness. The results showed that participants who viewed the common stress scenario first were less likely to label the stimulus persons in the subsequent scenarios as having a mental illness and less likely to perceive the stimulus persons in the subsequent scenarios as dangerous. However, participants who viewed the vignette describing a stimulus person who was an alcoholic or in a state of depression were more likely to label the stimulus person as having a mental illness and more likely to label the stimulus person as dangerous. This research demonstrated negative stereotypes are created by giving someone a mental disorder label and those labels are used to justify acts and thoughts of discrimination towards individuals labeled as having a mental disorder.

Much of the research regarding perceptions of mental disorders has been conducted in either the United States or Western Europe. Gureje, Lasebikan, Oluwanuga, Olley and Kola (2005) conducted a study to assess the attitudes held by people in Africa toward mental illness to see if views of people in this part of the world were similar to those of Westerners. In this study, adults living areas of Nigeria were Yuroba was the dominant language responded to a survey to measure their knowledge of mental illness, their attitudes toward those who are mentally ill, their

perception of who is responsible for the mental illness, and their perceptions of dangerousness. Results of this study showed that participants were not knowledgeable regarding the causes of mental illness and they considered individuals with mental illnesses to be very dangerous. Overall, this study showed that the process of stigmatizing individuals with mental illness is common among cultures outside of the United States and Europe and that fear of the mentally ill is connected with the misconception that those with mental disorders are responsible for their condition.

In general, there seems to be a tendency for people to combine their personal opinions with common stereotypes, which is highly "efficient because people can quickly generate impressions and expectations of individuals belonging to a stereotyped group" (Corrigan, Edwards, Green, Diwan, & Penn, 2001, p. 219). From this combination of opinions and stereotypes, people will then draw their own conclusions about an individual's character and rate of social acceptance (Horsfall, Cleary, & Hunt, 2010). The unfortunate result for those being stigmatized includes a damaged reputation, affecting every area of social life, as well as social rejection from society at large (Horsfall, Cleary & Hunt, 2010). Stigmatized individuals may also harm themselves. According to Corrigan (2004), individuals with mental disorders have a tendency to internalize the label that is put on them and thus believe that they are lesser members of society. This, in turn, can dramatically lower the self-esteem and self-efficacy of those with mental disorders.

While there are certain mental disorders that can only be detected by mental health professionals, there are mental disorders that can be identified by peers and others because of their more observable symptoms. Such mental disorders include Attention Deficit Hyperactivity Disorder (ADHD), Obsessive Compulsive Disorder (OCD), and stuttering. Because these

disorders are more easily identified, the individual suffering from the disorder is likely to be immediately stigmatized because of that condition. That stigmatization can be "a powerfully detrimental feature of the lives of people with mental disorders" (Link, Phelan, Bresnahan, Stueve & Pescosolido, 1999) and lead individuals from the community to prefer to maintain distance from those with the aforementioned conditions.

ADHD, as described in the DSM-IV-TR (American Psychiatric Association, 2000), is characterized by inattention, impulsivity, and hyperactivity. Symptoms of inattention include making careless mistakes while completing a task, trouble paying attention to a task or listening when spoken to, being easily distracted, and avoiding tasks that may require an extended amount of time to complete. Impulsivity includes trouble waiting for a turn, interrupting others while they are engaged in a conversation or task, and blurting out answers before another person has finished asking a question. Lastly, hyperactivity is characterized by fidgeting, excessive talking, and feelings of restlessness (American Psychiatric Association, 2000).

Stormont (2001) conducted a literature review which explored the connection between ADHD and outward aggression, and how this relationship influenced social acceptance of children and adolescents with ADHD. Stormont's review indicated that children with the predominantly hyperactive/impulsive type of ADHD are more likely to exhibit aggressive behaviors than children who have the predominantly inattentive type of ADHD. Additionally children with ADHD are more likely than children without ADHD to exhibit hostile aggression, designed to inflict harm, and reactive aggression, which occurs in an attempt to gain a certain item that is valuable to the child. The presence of aggression and other behavioral symptoms that are displayed by children with ADHD greatly affect peer interactions.

Diener and Milich (1997) conducted a study that evaluated children's level of satisfaction after interacting with a boy who had ADHD, or with a boy who did not have ADHD. Boys, whose age ranged from 8 to 11, were paired and presented with a puzzle task. Some pairs consisted of one boy with ADHD and the other boy without ADHD, while other pairs consisted of two boys without ADHD. After completing the task, the participants were asked to rate the desirability of their partners. Results showed that participants without ADHD viewed boys who had ADHD as less desirable to work with on the task and as more annoying than a partner who did not have the disorder. Furthermore, this research concluded that when a child who does not have ADHD and a child who does have ADHD interact with each other, there are more attempts made to avoid, resist, or end the interaction than when two children who do not have ADHD interact.

Martin, Pescosolido, Olafsdottir and McLeod (2007) took a different approach to studying how stigmas affect children and young adults with ADHD. Instead of examining the attitudes expressed by peers, Martin et al. investigated how the stigma of having a mental disorder affects the opinions that adults have of children with such a condition. In their study, each participant read a vignette in which a child was described as being either an 8 or 14-year-old boy or an 8 or 14-year-old girl. Regardless of the gender and age conditions, each character was described as having one of four medical conditions: ADHD, depression, asthma or "normal troubles." After reading one of the vignettes, participants responded to survey items to assess the social distance they would prefer from the child that was described, such as whether or not they would like that child to move into their neighborhood or be friends with their child. There were several interesting results of this study. While participants preferred to maintain social distance from children with mental disorders in general, participants preferred to maintain the most

distance from children with ADHD. Participants seemed to be more willing to accept children with mental disorders if they were younger and/or a female child, as opposed to being older and/or a male child. Gender of participant also influenced social distance preferences. Female participants seemed to be more tolerant of children and adolescents with any type of mental disorder than male participants.

OCD is classified in the DSM-IV-TR (American Psychiatric Association, 2000) as a mental disorder characterized by obsessions, or continual thoughts that are a cause of increased stress, and compulsions, which are the acts in response to those thoughts. Compulsions can be overt behaviors repeated by an individual that others can observe, such as hand washing, or compulsions can be covert behaviors, such as counting or repeating things silently to oneself. Obsessions and compulsions can interfere with an individuals daily functioning, including academic, occupational, and social elements of life. They can also take up a substantial amount of time, which can interfere with completing tasks involved in an individual's daily routine.

Unfortunately, the literature pertaining to how individuals with OCD are affected by stigma is limited. Simonds and Thorpe (2003), however, conducted a study that examined the attitudes that college students expressed towards others who had been characterized as having varying levels of severity of OCD. Undergraduate psychology majors read three cases about individuals who suffered from a checking OCD, a washing OCD, and a harming OCD. After reading each case description, participants completed a questionnaire on which they evaluated the stimulus person described in each case. The results of the study indicated that the college students held more negative attitudes of individuals with a harming OCD, compared to an individual with a checking or a washing OCD. Results also showed that the checking OCD was considered as least severe because the behavior of an individual with a checking OCD was not

considered to be as shameful as the behaviors of an individual with a harming or a washing OCD.

Stuttering is classified in the DSM-IV-TR (American Psychiatric Association, 2000) as one of the communication disorders. Stuttering is characterized by sound or word repetitions and broken words, where the individual pauses in the middle of speaking a word. Other symptoms of stuttering include word interjections and physical tension induced by speaking.

Stuttering is a mental disorder that draws negative, stereotypical attitudes towards an individual, which can undoubtedly add to the already high levels of stress that many stutterers feel when involved in social interactions (Blood & Wertz, 1997). According to Davis, Howell, and Cooke (2002), "there is a trend for children who stutter to hold a lower social position than that of children who do not stutter" (p. 943). Davis et al. conducted a study which investigated the social status and social behavior of children who stutter in classes of non-stuttering peers. Data for this study were collected through personal, one-on-one interviews with 403 school-aged children, ranging in age from 8 to 14-years-old, in 16 different schools. Each class contained one child who stuttered. All of the children in the classes were asked to rate their classmates in a variety of categories, including who they considered to be bullies and who they considered to be the victims of bullying. The results of their study showed the rate of social rejection for children who stutter was over twice as high as the rate of social rejection of their peers who did not stutter.

The effects of stigma endured by stutterers continue even into adulthood. Dorsey and Guenther (2002) examined how college professors and college students view college students who stutter. The participants of this study, which included 34 college professors and 57 college students, responded to a questionnaire describing a college student who stuttered or a college

student who did not stutter. The questionnaire asked participants to rate the personality traits of the stuttering or non-stuttering individual. The results of this study showed that both college professors and college students rated personality traits of college students who stutter as generally negative compared to personality traits of their non-stuttering peers.

Klassen (2002) took a different approach to studying the attitudes that people hold toward stutterers. Klassen's study evaluated how the people who interact with stutters view individuals who stutter, as well as how a stutterer views himself or herself. Relatives, friends, and colleagues of an individual who stutters, participated in this study. Participants were asked to rate individuals who stutter on six scales of character attributes. These scales included pairs of shy-bold, friendly-unfriendly, secure-insecure, withdrawn-outgoing, anxious-composed, and cooperative-uncooperative. Participants' responses to the first part of the questionnaire showed that individuals who have regular contact with an individual who stutters, responded more positively than members of the general population have in previous studies. The second part of the questionnaire asked the participants to name a person who stutters that they had regular contact with and to tailor their answers to fit their thoughts of that individual. Results of this study showed that stereotypical attitudes toward an individual who stutters decreased if a person was involved in regular interactions with a stutterer.

The present study will examine college students' general preference for social distance from individuals who have mental disorders, as well as their preference for social distance from a peer with a specific diagnostic label of Attention Deficit Hyperactivity Disorder, Obsessive Compulsive Disorder, or a Stuttering Disorder. These specific disorders were chosen because past research has shown that individuals who have them are often stigmatized and experience social rejection. Participants completed the Modified Social Distance Scale to measure general

preference for distance from individuals with mental disorders and subsequently read a vignette describing a male or female college student who was diagnosed and treated for either ADHD, OCD, or a Stuttering Disorder. Participants then completed a vignette survey on which they rated their preference for social distance from the stimulus person described in the vignette. The following three hypotheses were evaluated:

1. Hypothesis 1: Scores on the Modified Social Distance Scale will be positively correlated with the vignette social distance ratings.
2. Hypothesis 2: Diagnostic label will have a significant effect on the vignette social distance ratings with participants preferring more distance from a peer who stutters than from a peer with ADHD or OCD.
3. Hypothesis 3: Gender of stimulus person will have a significant effect on the vignette social distance ratings, with participants preferring more distance from a male peer with a specific mental disorder than a female peer with the same mental disorder.

Method

Participants

The participants were 88 men and 92 women, all undergraduate students at Coastal Carolina University. Participants ages ranged from 17 to 39 years (M = 19.32, SD = 2.29). Sixty-one percent of the participants were Caucasian and 13.5 percent were African American. The remaining 12.1 percent of the participants classified themselves as multiracial, Hispanic, Latino, Asian or Other.

Participants were recruited from classes that fulfilled a core curriculum requirement at Coastal Carolina University. Participants were treated in accordance to the ethical guidelines set forth by the American Psychological Association (APA, 2002).

Materials

The researcher prepared six vignettes. Three of the vignettes described a male college student ("Michael") who had been diagnosed with ADHD, OCD, or stuttering in childhood and had received treatment from a specialist. The remaining three vignettes described a female ("Michelle") college student who had been diagnosed with ADHD, OCD, or stuttering in childhood and had received treatment from a specialist. The vignettes are shown in Appendix A.

Two surveys were used to measure participants' desire for social distance. The first survey was the Modified Social Distance Scale (Smith & Caswell, 2010). A copy of this scale is shown in Appendix B. This scale consisted of six items designed to measure the participants' overall preference for social distance from individuals with mental disorders. Participants read a given statement and then responded to that statement by choosing one of the following responses that best represented their level of agreement or disagreement: *Definitely Not, Probably Not, Probably, or Definitely*. A numeric value was assigned to each of the alternatives. The questions "Would you feel afraid to have a conversation with someone who has a mental illness?," "Would you be upset or disturbed about working at the same job with someone who has a mental illness?," Would you feel upset or disturbed about rooming with someone who has a mental illness?," and "Would you feel ashamed if people knew that someone in your family has been diagnosed with a mental illness?" were scored as follows: Definitely Not = 4, Probably Not = 3, Probably = 2, and Definitely = 1. The questions "Would you be able to maintain a friendship with someone who has a mental illness?" and "Would you marry someone with a mental illness?," however, were reverse scored as follows: *Definitely Not* = 1, *Probably Not* = 2, *Probably* = 3, and *Definitely* = 4. Numeric responses to each item were summed to create a total distance score, with lower scores representing a desire for greater distance and higher scores

representing the desire for less distance from an individual with a mental illness. The second survey, called the Vignette Survey, was used to measure participants' responses to the stimulus person described in the vignettes. The Vignette Survey, shown in Appendix C, consisted of nine items which were modeled after the General Social Survey (GSS, 2006). Each participant was first asked to identify how serious he or she considered the stimulus person's problem to be by selecting one of the following responses: *Very Serious, Somewhat Serious, Not Very Serious, Not At All Serious*. A numeric value was assigned to each of the alternatives as follows: *Very Serious* = 1, *Somewhat Serious* = 2, *Not Very Serious* = 3, *Not At All Serious* = 4. Then each participant rated his or her willingness to be roommates, have lunch occasionally, be friends, occasionally work on a group in-class assignment, work on a semester long project, or be tutored by the stimulus person. For these six items, participants responded by selecting one of the following responses: *Definitely Not, Probably Not, Probably*, *Definitely*. A numeric value was assigned to each of the alternatives as follows: *Definitely Not* = 4, *Probably Not* = 3, *Probably* = 2, *Definitely* = 1. A distance score was recorded for each of these individual six items. Additionally, a total vignette distance score was created by summing the numeric responses to the six items. The last two items were open-ended questions, asking whether the person described in the vignette had a mental disorder and, if so, what it was.

A demographic survey, shown in Appendix D, was also used to obtain information regarding the participants' genders, age, major, class rank, race/ethnicity and the type of environment (suburban, urban, or rural) in which they grew up. The demographic survey also included a question regarding the participants' past contact with individuals with mental disorders.

Procedure

Instructors from Coastal Carolina University, in a variety of disciplines, were contacted by the researcher to obtain permission to recruit participants in their classes. Upon entering each class, the researcher introduced herself to the students and read a brief statement, describing what the students would be doing if they chose to participate. The students were also informed that participation was voluntary, the identity of students who chose to participate would remain anonymous, and that participants could withdraw from the study at any time. Before participants began the study, they were presented with two Informed Consent forms, shown in Appendix E, outlining the general purposes of the study and what to expect during their participation in the study. The participants were asked to sign and date both copies of the Informed Consent Form and return one copy to the researcher. The participants were then given a packet of materials. Participants responded first to the demographic survey and then completed the Modified Social Distance Scale (Smith & Caswell, 2010). Participants then read their designated vignette describing either a male or a female college student who had been diagnosed and treated for ADHD, OCD or Stuttering. After reading the given vignette, participants were asked to complete the Vignette Survey on which they rated their preference for distance from the individual described in the vignette. After participants returned their materials to the researcher, the researcher read the debriefing statement, shown in Appendix F. This statement explained the purpose of the study, thanked the participants for their participation, and asked for their cooperation in not discussing the research study with others. Participants were also given the option to contact the researcher or attend a presentation to learn about the results of the study.

In the current study, the independent variables were the diagnostic label (ADHD, OCD, or Stuttering) and the gender (male or female) of the stimulus person described in the vignette.

The dependent variables were the scores of the Modified Social Distance Scale and the social distance ratings on the Vignette Survey.

Results

Complete data were obtained from all 180 participants, with 30 participants in each of the six mental health condition/gender groups. The following scores were recorded for each of the participants: a Modified Social Distance Scale score, a distance score for each of the six vignette items (roommate, lunch, friends, in-class assignment, class presentation, and tutor), and a total vignette social distance score. The total vignette distance score was calculated by summing participant's responses on the aforementioned six vignette items. As noted in the Method section, low social distance scores indicate desire for more social distance from the stimulus person and high social distance scores indicate desire for less social distance from the stimulus person.

To test the first hypothesis regarding the relationship between participant's general preference for distance from people with mental disorders and preference for distance from an individual with a specific disorder, the Pearson correlation was calculated between Modified Social Distance Scale scores and total vignette scores. A significant positive correlation between the scores was found $r(180) = .209$, $p = .005$, supporting the hypothesis. The correlation was relatively weak, with Modified Social Distance Scale scores accounting for only 4 percent of the variability in the total vignette scores.

To evaluate the hypotheses regarding participants' preference for distance from male and female individuals with a specific diagnostic label, a 3x2 between-subjects factorial ANOVA was calculated for each of the six vignette items, with post hoc comparisons made using the Tukey HSD test. All effects were evaluated with an alpha level set at .05. In each of the six ANOVAs, no significant main effect for gender of stimulus person was found. Participants'

social distance ratings for “Michael” and “Michelle” were statistically equivalent, a finding which failed to support Hypothesis 3. Additionally, in each of the six ANOVAs, no significant interaction was found between diagnostic label and gender of stimulus person. However, a significant main effect for diagnostic label was found when the ANOVA was conducted on each of the six vignette items. Contrary to Hypothesis 2, participants did not prefer significantly great social distance from a peer who stuttered that a peer with ADHD or OCD. Differences in the mean social distance ratings as a function of diagnostic label are described below for each of the six vignette items.

The first ANOVA conducted on social distance ratings for vignette item “How willing would you be to have Michael/Michelle as your roommate?” produced a significant main effect for diagnostic label, $F(5,174) = 9.32$, $p = .01$. The mean rating for ADHD was 3.22 ($SD = .72$), the mean for OCD was 2.98 ($SD = .65$), and the mean for stuttering was 3.52 ($SD = .65$). Post hoc analysis indicated that participants preferred significantly more distance from stimulus persons with OCD or ADHD than from an individual who stutters. Mean social distance ratings of stimulus persons with ADHD and OCD were not significantly different.

The second ANOVA conducted on social distance ratings for the vignette item “How willing would you be to occasionally have lunch with Michael/Michelle and others?” produced significant main effect for diagnostic label, $F(5,174) = 3.21$, $p = .04$. The mean social distance rating for ADHD was 3.58 ($SD = .53$), the mean for OCD was 3.57 ($SD = .72$), and the mean for stuttering was 3.8 ($SD = .40$). Post hoc analysis indicated that there was a marginally significant preference for greater distance difference from a stimulus person with OCD or ADHD than from an individual who stutters. Mean social distance ratings did not differ significantly for stimulus persons with ADHD and OCD.

The third ANOVA conducted on social distance ratings to the vignette item "How willing would you be to become friends with Michael/Michelle?" produced a significant main effect for diagnostic label, $F(5,174) = 3.99$, $p = .02$. The mean social distance rating for ADHD was 3.58 ($SD = .53$), the mean for OCD was 3.53 ($SD = .68$), and the mean for stuttering was 3.8 ($SD = .40$). Post hoc analysis indicated that participants preferred significantly more distance from stimulus persons with OCD than with stuttering. There was no significant difference between the mean social distance ratings of stimulus persons with ADHD and stuttering or between the mean social distance ratings of stimulus person with ADHD and OCD.

The fourth ANOVA conducted on social distance ratings to the vignette item "How willing would you be to occasionally work with Michael/Michelle and others on an in-class discussion assignment?" produced a significant main effect for diagnostic label, $F(5,174) = 4.87$, $p = .01$. The mean social distance rating for ADHD was 3.43 ($SD = .56$), the mean for OCD was 3.37 ($SD = .76$), and the mean for stuttering was 3.7 ($SD = .50$). Post hoc analysis using indicated that participants preferred significantly more distance from stimulus persons with OCD or ADHD than from an individual who stutters. There was no significant difference between the mean social distance ratings of stimulus persons with ADHD and OCD.

The fifth ANOVA conducted on social distance ratings to the vignette item "How willing would you be to choose Michael/Michelle to work closely as your partner on a semester- long project/presentation?" produced a significant main effect for diagnostic label, $F(5,174) = 4.22$, $p = .02$. The mean for ADHD was 3.0 ($SD = .80$), the mean for OCD was 3.03 ($SD = .78$), and the mean for stuttering was 3.37 ($SD = .71$). Post hoc analysis indicated that participants preferred significantly more distance from stimulus persons with OCD or ADHD than from an individual who stutters. There was no significant difference between the mean social distance ratings of stimulus persons with ADHD and OCD.

The sixth ANOVA conducted on social distance ratings to the vignette item "How willing would you be to have Michael/Michelle tutor you if you needed help in a class?" produced a significant main effect for diagnostic label, $F(5,174) = 3.75$, $p = .03$. The mean for ADHD was 3.02 ($SD = .75$), the mean for OCD was 2.93 ($SD = .80$), and the mean for stuttering was 3.3 ($SD = .74$). Post hoc analysis indicated that participants preferred significantly more distance from stimulus persons with OCD or ADHD than from an individual who stutters. There was no significant difference between the mean social distance ratings of for preference for stimulus persons with ADHD and OCD.

To determine if participants' responses to the vignette item "How serious would you consider Michael's problem to be?" varied as a function of diagnostic label, a one-way ANOVA was conducted on the seriousness ratings. A significant effect of diagnostic label was found, $F(2,177) = 4.27$, $p = .015$. The mean seriousness rating for ADHD was 2.73 ($SD = .82$), the mean for OCD was 2.35 ($SD = .67$), and the mean for stuttering was 2.65 ($SD = .76$). Post hoc analysis using the Tukey HAD test indicated that participants rated OCD as significantly more serious than ADHD. There was no significant difference between the mean seriousness ratings of stimulus persons with OCD and stuttering or between the mean seriousness ratings of stimulus persons with ADHD and stuttering.

A final analysis was conducted to assess whether participants' responses to the vignette item "Does Michael/Michelle have a mental disorder?" varied as a function of diagnostic label of the stimulus person. The frequency of *Yes* and *No* responses for each of the three diagnostic labels was as follows: stimulus person with ADHD – 25 *Yes* and 35 *No*; stimulus person with OCD – 43 *Yes* and 16 *No*; stimulus person who Stuttered – 14 *Yes* and 46 *No*. a chi square test for independence revealed a significant relationship between diagnostic label of the stimulus

person and whether or not participants viewed that person as having a mental disorder, $\chi^2(2, n = 179) = 30.04$, $p < .001$. Seventy-three percent of the participants who evaluated a stimulus person with OCD indicated that the person had a mental disorder and 42% of participants who evaluated a stimulus person with ADHD indicated that the person had a disorder. Of the participants who evaluated a stimulus person who stuttered, only 23% indicated that the person had a mental disorder.

Discussion

The purpose of this study was to assess college students' general preference for social distance from individuals with mental disorders a preference for distance from a peer who had been previously diagnosed and treated for a specific mental disorder. Hypothesis 1, which stated that Scores on the Modified Social Distance Scale would be positively correlated with the vignette social distance ratings, was supported. The results of the analysis concluded that the higher the participants' scores were on the Modified social distance scale, the higher the participants scores were on the vignette survey. Hypothesis 2, however, was not supported. Hypothesis 2 stated that participants would prefer more distance from a peer who stuttered than from a peer with ADHD or OCD when, in fact, the results determined that participants preferred to maintain more distance from a peer with ADHD and OCD than from a peer who stuttered. Likewise, Hypothesis 3, which stated that participants would prefer more social distance from a male peer with a specific mental disorder than from a female peer with the same mental disorder, was not supported. The results of the analysis concluded that participants preferred the same amount of social distance from male and female stimulus persons with any of the given diagnostic labels.

The results of this research offered interesting insights of how college students perceive individuals with diagnostic labels, but the results also differed from those found in previous research. For example, unlike the results found by Martin et al. (2007), participants rated stimulus persons with diagnostic labels as generally positive and did not desire to maintain extreme social distance from them. A possible reason for this is that the vignettes were worded positively, describing the stimulus person as receiving treatment and with symptoms under good control. On the other hand, research conducted by Simonds and Thorpe (2003) and Martin et al. (2007) used vignettes that were worded negatively, where the stimulus person was not described as receiving treatment or described as having any hope of leading a "normal" life. It is also a possibility that, because the stimulus persons were described as having the symptoms of their given disorder under control, the participants linked successful treatment of the given disorder with the ability to have successful relationships. In other words, because participants viewed the treatment the stimulus person received as successful, the diagnostic label did not prompt a desire for social distance. Results of this research also found that, unlike Martin et al. (2007), participants were unaffected by the gender of the stimulus person described in the vignette. In other words, participants did not view males with diagnostic labels more negatively than their counterpart.

There have also been several studies that cite the stigma attached to stuttering, such as research conducted by Davis et al. (2002), which concluded that stutters experience high rates of social rejection compared to peers who do not stutter, and research conducted by Dorsey and Guenther (2002), which concluded that college students who stutter are thought to have more negative personality traits when compared with peers who do not stutter. In the present study, however, stimulus persons described as having Stuttering Communication Disorder were viewed

as more socially desirable than stimulus persons described as having ADHD or OCD, who were non-stuttering individuals. A possible explanation for this is that, while stuttering is listed in the DSM-IV-TR (American Psychiatric Association, 2002) as a mental disorder, participants did not view stimulus persons with the diagnostic label of Stuttering Communication Disorder as having a mental disorder. Many participants viewed Stuttering Communication Disorder as a physical problem or a speech impediment. In fact, when asked if the stimulus person described with the diagnostic label of Stuttering Communication Disorder had a mental disorder, 76.7 percent of participants said that the stimulus person did not have a mental disorder.

There were several limitations within the methodology of this study. One such limitation is related to the convenience sampling technique that was used. Data were only collected from willing participants in certain classes, in which the instructor would allow data collection. While these classes were chosen from the core curriculum, in hopes of collecting data from participants in a wide range of majors and at different points their college career, it may have affected the results in that data was only collected from classes within the colleges of Humanities and Science, but data was not collected from classes within the colleges of Business or Education. Another limitation related to the convenience sampling technique that was used is that certain variables were unable to be controlled by the researcher, such as data being collected in different rooms, at different times of the day, at different points during the class period, and whether or not the instructor remained in the class during the time the students were participating in the study. All of these uncontrollable variables had the potential to impact the results of this research because they could have influenced the participant at any point in time. For example, if the researcher was given time at the end of the class to conduct the research, participants may not have put much thought into their responses because they were ready to leave. Likewise, if the

instructor did not stay in the class during the time students were participating in the study, participants may not have taken their participation as seriously as participants whose instructor stayed in the class at the time of participation. Another limitation is that all of the participants were college students within a certain age range, so the results of this study are not generalizable to the general public.

There are many possibilities to further examine topics related to the present study. As this study was the first to directly compare social distance ratings of individuals with the specific diagnostic labels of ADHD, OCD, and stuttering, another study comparing the same diagnostic labels can be conducted to see if similar results are obtained. Another possibility for future research is that, after the interesting results found in this study in relation to stutterers, research could be conducted to examine the reasons why people think that stuttering is not a mental disorder, or for that matter, what members of the general public believes qualifies an individual as having a mental disorder.

The implications of this research can be useful to those who wish to educate members of the general public about mental disorders and the stigma that can be attached to having a diagnostic label. Knowledge seems to be a key component in reducing the stigma associated with having a diagnostic label. As shown by the results of the chi square analysis revealed, participants preferred to maintain less distance from stimulus persons with the diagnostic labels of ADHD and stuttering and more distance from the stimulus persons with the diagnostic label of OCD. It is inferred by the researcher that the reason for this is that participants were more familiar with the general concepts or symptoms of ADHD and stuttering than they were with the general concepts or symptoms of OCD, therefore giving members of the general public proper

education may have the ability to reduce stigmatizing attitudes towards, and beliefs about, individuals with mental disorders.

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Appendix A

Vignettes

Vignette 1: ADHD-Male

Michael grew up in a middle class family. His parents are happily married and he has one brother and one sister. He grew up in a suburban neighborhood and attended the local public schools. He enjoys listening to music, watching movies, and a variety of recreational activities. As a child, Michael had a hard time paying attention and listening to directions. He was also easily distracted and was unable to sit still. This led to difficulty completing school assignments and interacting positively with his peers. Michael's parents were concerned and brought him to see a specialist, who diagnosed him with Attention Deficit Hyperactivity Disorder. Michael then began treatment and his symptoms have been under good control ever since. Michael is currently enjoying his freshman year of college and is still being treated for Attention Deficit Hyperactivity Disorder.

Vignette 2: ADHD-Female

Michelle grew up in a middle class family. Her parents are happily married and she has one brother and one sister. She grew up in a suburban neighborhood and attended the local public schools. She enjoys listening to music, watching movies, and a variety of recreational activities. As a child, Melissa had a hard time paying attention and listening to directions. She was also easily distracted and was unable to sit still. This led to difficulty completing school assignments and interacting positively with her peers. Michelle's parents were concerned and brought her to see a specialist, who diagnosed her with Attention Deficit Hyperactivity Disorder. Melissa then began treatment and her symptoms have been under good control ever since. Melissa is currently enjoying her freshman year of college and is still being treated for Attention Deficit Hyperactivity Disorder.

Vignette 3: OCD-Male

Michael grew up in a middle class family. His parents are happily married and he has one brother and one sister. He grew up in a suburban neighborhood and attended the local public schools. He enjoys listening to music, watching movies, and a variety of recreational activities. As a child, Michael started to become apprehensive and even reluctant at times to leave the house because of his need to check multiple times that his possessions were where they were supposed to be. He also had trouble completing assignments and tests on time because he was continuously checking his answers. This led to difficulty completing school assignments and interacting positively with his peers. Michael's parents were concerned and brought him to see a specialist, who diagnosed him with Obsessive Compulsive Disorder. Michael then began treatment and his symptoms have been under good control ever since. Michael is currently enjoying his freshman year of college and is still being treated for Obsessive Compulsive Disorder.

Vignette 4: OCD-Female

Michelle grew up in a middle class family. Her parents are happily married and she has one brother and one sister. She grew up in a suburban neighborhood and attended the local public schools. She enjoys listening to music, watching movies, and a variety of recreational activities. As a child, Michelle started to become apprehensive and even reluctant at times to leave the house because of her need to check multiple times that her possessions were where they were supposed to be. She also had trouble completing assignments and tests on time because she was continuously checking her answers. This led to difficulty completing school assignments and interacting positively with her peers. Michelle's parents were concerned and brought her to see a specialist, who diagnosed her with Obsessive Compulsive Disorder. Michelle then began treatment and his symptoms have been under good control ever since. Michelle is currently enjoying her freshman year of college and is still being treated for Obsessive Compulsive Disorder.

Vignette 5: Stuttering-Male

Michael grew up in a middle class family. His parents are happily married and he has one brother and one sister. He grew up in a suburban neighborhood and attended the local public schools. He enjoys listening to music, watching movies, and a variety of recreational activities. As a child, Michael started to repeat words, as well as lengthen syllables, during conversation. There were also times when his speech became blocked and he was unable to produce any vocal sounds for several seconds during a conversation. This led to difficulty completing school assignments and interacting positively with his peers. Michael's parents were concerned and brought him to see a specialist, who diagnosed him with Stuttering Communication Disorder. Michael then began treatment and his symptoms have been under good control ever since. Michael is currently enjoying his freshman year of college and is still being treated for Stuttering Communication Disorder.

Vignette 6: Stuttering-Female

Michelle grew up in a middle class family. Her parents are happily married and he has one brother and one sister. She grew up in a suburban neighborhood and attended the local public schools. She enjoys listening to music, watching movies, and a variety of recreational activities. As a child, Michelle started to repeat words, as well as lengthen syllables, during conversation. There were also times when her speech became blocked and she was unable to produce any vocal sounds for several seconds during a conversation. This led to difficulty completing school assignments and interacting positively with her peers. Michelle's parents were concerned and brought her to see a specialist, who diagnosed her with Stuttering Communication Disorder. Michelle then began treatment and her symptoms have been under good control ever since. Michelle is currently enjoying her freshman year of college and is still being treated for Stuttering Communication Disorder.

Appendix B

Modified Social Distance Scale

Please read each question below and circle the appropriate answer that best describes your response to the question:

1. Would you feel afraid to have a conversation with someone who has a mental illness?
    a. Definitely Not
    b. Probably Not
    c. Probably
    d. Definitely
2. Would you be upset or disturbed about working at the same job with someone who has a mental illness?
    a. Definitely Not
    b. Probably Not
    c. Probably
    d. Definitely
3. Would you be able to maintain a friendship with someone who has a mental illness?
    a. Definitely Not
    b. Probably Not
    c. Probably
    d. Definitely
4. Would you feel upset or disturbed about rooming with someone who has a mental illness?
    a. Definitely Not
    b. Probably Not
    c. Probably
    d. Definitely
5. Would you feel ashamed if people knew that someone in your family has been diagnosed with a mental illness?
    a. Definitely Not
    b. Probably Not
    c. Probably
    d. Definitely
6. Would you marry someone with a mental illness?
    a. Definitely Not
    b. Probably Not
    c. Probably
    d. Definitely

Appendix C

Vignette Survey

Please read each question below and circle the answer that best describes your response to the question.

1. How serious would you consider Michael's problem to be?
    a. Very Serious
    b. Somewhat Serious
    c. Not very Serious
    d. Not at all Serious
2. How willing would you be to have Michael as your roommate?
    a. Definitely Willing
    b. Probably Willing
    c. Probably Unwilling
    d. Definitely Unwilling
3. How willing would you be to occasionally have lunch with Michael and others?
    a. Definitely Willing
    b. Probably Willing
    c. Probably Unwilling
    d. Definitely Unwilling
4. How willing would you be to become friends with Michael?
    a. Definitely Willing
    b. Probably Willing
    c. Probably Unwilling
    d. Definitely Unwilling
5. How willing would you be to occasionally work with Michael and others on an in-class discussion assignment?
    a. Definitely Willing
    b. Probably Willing
    c. Probably Unwilling
    d. Definitely Unwilling
6. How willing would you be to choose Michael to work closely as your partner on a semester- long project/presentation?
    a. Definitely Willing
    b. Probably Willing
    c. Probably Unwilling
    d. Definitely Unwilling
7. How willing would you be to have Michael tutor you if you needed help in a class?
    a. Definitely Willing
    b. Probably Willing
    c. Probably Unwilling
    d. Definitely Unwilling
8. Does Michael have a mental disorder?
    a. Yes
    b. No
9. If so, what is it? _____

Vignette Survey

1. How serious would you consider Michelle's problem to be?
    a. Very Serious
    b. Somewhat Serious
    c. Not very Serious
    d. Not at all Serious
2. How willing would you be to have Michelle as your roommate?
    a. Definitely Willing
    b. Probably Willing
    c. Probably Unwilling
    d. Definitely Unwilling
3. How willing would you be to occasionally have lunch with Michelle and others?
    a. Definitely Willing
    b. Probably Willing
    c. Probably Unwilling
    d. Definitely Unwilling
4. How willing would you be to become friends with Michelle?
    a. Definitely Willing
    b. Probably Willing
    c. Probably Unwilling
    d. Definitely Unwilling
5. How willing would you be to work occasional with Michelle and others on an in-class discussion assignment?
    a. Definitely Willing
    b. Probably Willing
    c. Probably Unwilling
    d. Definitely Unwilling
6. How willing would you be to choose Michelle to work closely as your partner on a semester-long project/presentation?
    a. Definitely Willing
    b. Probably Willing
    c. Probably Unwilling
    d. Definitely Unwilling
7. How willing would you be to have Michelle tutor you if you needed help in a class?
    a. Definitely Willing
    b. Probably Willing
    c. Probably Unwilling
    d. Definitely Unwilling
8. Does Michelle have a mental disorder?
    a. Yes
    b. No
9. If so, what is it? _____

Appendix D

Demographic Survey

Please check or write the appropriate answer for each demographic item below:

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1. Gender: Male _____ Female _____

2. Age: _____

3. Academic Major:_____

4. Class Rank: Freshman _____ Sophomore _____

   Junior _____ Senior _____

5. Race/ Ethnicity: _____

6. Which of the following best describes the area in which you grew up:

   Urban _____ Rural _____ Suburban _____

7. Have you ever had any personal contact with any individuals with a mental disorder?

   Yes _____ No _____

Appendix E

Informed Consent Form

I, _____, agree to participate in the research entitled *"Functions of Distance"* conducted by **Kaitlyn Zuilkowski** (CCU student, Email: kazuilko@coastal.edu) under the supervision of **Dr. Kiera Willams,** Honors Program, Coastal Carolina University, P.O. Box 261954, Conway, South Carolina, 29528-6054, Phone: 843-349-6664, Email: kwillia1@coastal.edu. I understand that this participation is entirely voluntary. I may withdraw my consent at any time without penalty and have the results of my participation returned to me, removed from the research records, or destroyed.

The following points have been explained to me:

1-The purpose of this research is to determine how typical college students perceive other college students. My participation in this study will further my understanding of the processes and purposes of psychological research.

2-I will be reading a short description of a college student and answering a series of survey questions to determine overall perceptions of that person. The entire study is expected to take about a half hour. In order to make this study valid, some information may be withheld until after the study.

3-No psychological or physical discomforts or stresses are foreseen. I understand that if I feel uncomfortable answering any questions, I may skip those questions or withdraw my participation from the study without penalty.

4-No social or legal risks are foreseen.

5- Participation will be anonymous and the results cannot be released in any identifiable manner.

6-The investigator will answer any further questions, regarding the research, now or during the course of the project.

_____ _____

Signature of Investigator Signature of Participant Date

PLEASE SIGN BOTH COPIES OF THIS FORM.
KEEP ONE AND RETURN THE OTHER TO THE INVESTIGATOR.

Research at Coastal Carolina University which involves human participants is overseen by the Institutional Review Board. Questions or problems regarding your rights as a participant should be addressed to the IRB, Coastal Carolina University, Office of Grants and Sponsored Research, P.O. Box 261954, 2431 Highway 501, Foundation Center, Conway, SC 29528-6054, Telephone (843) 349-2978.

Appendix F

Debriefing

In this study, I was interested in the preferences for distance, both socially and academically, from individuals with mental disorders. Specifically, I was interested in how willing a person would be to socialize and become friends with male and female college students who were diagnosed and treated for a mental disorder, as well as that person's willingness to work closely on a class project or presentation with that same individual.

The vignette you were instructed to read was meant to prompt you to think about your personal opinion of an individual with a mental disorder label. Everyone who participated was randomly assigned to one of three groups. One group read a vignette describing an individual who had been diagnosed with and treated for Attention Deficit Hyperactivity Disorder, while another group read a vignette describing an individual who had been diagnosed with and treated for Obsessive Compulsive Disorder, and the third group read a vignette describing and individual who was diagnosed with and treated for stuttering. The purpose of the second survey was to get an idea of each participant's general distance that he or she preferred to keep from individuals with mental disorders. The third survey was meant to measure each participant's preference for social and academic distance from the individual specifically described in the vignette. I also asked for information regarding where you grew up and if you had personally known and/or interacted with anyone who has been diagnosed with a mental disorder to determine if these factors are related to preference for social and academic distance.

Thank you for your participation. I would appreciate it if you would not discuss this study with other students as I am collecting data in other classes. If you want to learn more about my results, please attend my research presentation in the spring at the Celebration of Inquiry or contact me by email.