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RELATIONSHIP BETWEEN BELIEVED CAUSES OF DEPRESSION AND SOCIAL
DISTANCE

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ABSTRACT

The purpose of the present study was to examine the relationship between causal explanations for depression and the social distance individuals would desire from a depressed person in order to clarify whether changes to existing public awareness campaigns concerning depression might be warranted. The sample used consisted of 223 students attending a university in a large mid-western city. Each participant received a vignette that described an individual suffering from depressive symptoms and also included information regarding whether these symptoms were caused by psychosocial or biological factors. The subjects then completed a survey incorporating questions from the modified version of the Bogardus Social Distance Scale (1987) concerning the individual portrayed in the vignette. This survey altered the original scale in order to include questions regarding friends and family members. A MANOVA was conducted in order to simultaneously analyze the results; however, this did not show a significant relationship between the belief in the cause of depression and social distance desired. Further exploratory *t*-tests did suggest causal beliefs may affect social distance desired from friends, with a greater amount of social distance desired when individuals believe the depression to be caused by non-biological factors. It was also observed that laypersons reported a desire for more social distance overall from strangers, with less social distance desired from friends and family members. The findings suggest current or future public awareness campaigns concerning depression might benefit from

considerations of both the causal depictions utilized in the campaign as well as the relationships laypersons might have with different depressed persons.

TABLE OF CONTENTS

	Page
ABSTRACT.....	iii
LIST OF TABLES.....	vii
CHAPTER	
I. INTRODUCTION.....	1
Research Questions.....	3
Hypotheses.....	3
II. REVIEW OF RELEVANT LITERATURE.....	4
Lay Beliefs as to the Causes of Mental Illness.....	5
Stigma, Attributions, and Causal Beliefs in Depression.....	11
Stigma and Depression.....	11
Social Support and Depression.....	12
Social Distance and Mental Illness.....	14
Attribution Theory.....	16
Causal Beliefs/Attributions and Stigma.....	17
Public Awareness Campaigns and Depression.....	20
Public Awareness Campaigns Outside the United States.....	20
Public Awareness Campaigns Inside the United States.....	23
III. METHODS.....	27
Participants.....	27
Apparatus.....	28
Procedure.....	30

IV. RESULTS.....	32
V. DISCUSSION.....	44
VI. CONCLUSION.....	48
REFERENCES.....	50
APPENDIX.....	58
A. Informed Consent.....	59
B. Vignettes.....	60
1. Female and biological cause of depression.....	60
2. Female and psychosocial cause of depression.....	61
3. Male and biological cause of depression.....	62
4. Male and psychosocial cause of depression.....	63
C. Opinion Surveys.....	64
1. Opinion Survey One.....	64
2. Opinion Survey Two.....	70
3. Opinion Survey Three.....	76
4. Opinion Survey Four.....	82
5. Opinion Survey Five.....	88
6. Opinion Survey Six.....	94
D. Original Questions from the Modified Form of the Bogardus Distance Scale.....	100
E. IRB APPROVAL.....	101

LIST OF TABLES

Table	Page
I. Subjects in each Condition (Gender of Sufferer and Described Cause of Depression).....	33
II. Social Distance from Strangers: Descriptive Statistics.....	35
III. Social Distance from Friends: Descriptive Statistics.....	36
IV. Social Distance from Family Members: Descriptive Statistics.....	37
V. Correlations between Dependent Variables.....	39
VI. MANOVA of Causes of Depression with the Social Distance from Strangers, Friends, and Family Members.....	40

CHAPTER I

INTRODUCTION

Previous research has demonstrated that increased social support is associated with significant benefits in the treatment of those suffering from depression (Dobkin, Panzarella, Fernandez, Alloy, & Cascardi, 2004; Koizumi et al., 2005; Leskela et al., 2006; Milevsky, 2005; Panzarella, Alloy, & Whitehouse, 2006). In the United States, large-scale public awareness campaigns developed by the National Institute of Mental Health and self-help organization National Alliance on Mental Illness seek to capitalize on such findings and improve depression outcomes by emphasizing biological rather than psychosocial explanations for depression. The logic of such campaigns appears to be as follows: A belief that depression is a medical illness not under the control of the depressed person will reduce stigma and lead individuals interacting with depressed persons to offer more social support and otherwise move closer to help the sufferer, in the same way that a person might offer support to someone with a non-psychiatric illness such as cancer. However, it is unclear whether such a strategy actually reduces stigma, improves social support for, and reduces social distance from, depressed persons. If such

a strategy has little, or negative, effects on the views and actions people take toward depressed persons, it appears reasonable to suggest that the large amount of resources devoted to such a strategy in the campaigns described above could be shifted toward more effective means of improving social support treatment outcomes.

The purpose of the present study is to explore the relationship between causal explanations for depression and amount of social distance one would desire with respect to an individual with depressive symptoms. It is possible that endorsing a biological causal belief for depression is associated with considering the disorder to be uncontrollable and this in turn would lead to a willingness to move closer to the depressed person and offer helpful behaviors. Conversely, it is possible that endorsement of a biological cause for depression would have little effect on social distance, or that such endorsement would lead to an increased desire for distance from the depressed person.

The relationship between causal beliefs of mental illness and social distance has been studied by multiple authors, but many such studies have focused on schizophrenia rather than depression (e.g., Angermeyer, Dietrich, Pott, & Matschinger, 2005; Breheny, 2007; Lauber, Nordt, & Rossler, 2005; Read, Haslam, Sayce, & Davies, 2006). It thus appears that additional studies related to causal beliefs of depression and how such beliefs might affect social distance are warranted. It can also be noted that social *support* as it relates to causal beliefs of mental illness has been examined somewhat more frequently than has social *distance*; the two areas are related but somewhat distinct constructs, and it is the latter that is the focus of this study. It is hoped that the findings of this study might be used to help clarify whether the large-scale public awareness

campaigns described above are likely to be effective in reducing social distance from those suffering from depressive illness.

Research Questions

1. Does a relationship exist between causal explanations for depression and the amount of social distance one would desire from an individual diagnosed with depression?
2. Is the amount of social distance one would desire from a depressed person associated to the relationship between the individuals?

Hypotheses

1. A relationship exists between causal explanations for depression and the amount of social distance individuals desire from those with depression.
2. The amount of social distance individuals desire will differ depending upon whether the depressed person being considered is a stranger, friend, or family member.

CHAPTER II

REVIEW OF RELEVANT LITERATURE

Major Depressive Disorder (MDD) is a mental disorder that affects an individual's mood, behavior, and thoughts. Symptoms of the disorder include a depressed mood and/or loss of interest or pleasure in most activities, along with at least three or four other symptoms such as significant changes in weight or appetite, sleep disruptions, concentration difficulties, psychomotor retardation or agitation, excessive feelings of worthlessness and/or guilt, and thoughts of death or suicide. Symptoms must be present most of the time on most days over a two-week period or longer for the diagnosis of MDD to be made (American Psychiatric Association [APA], 2000). Prevalence of MDD is rather high, with the lifetime risk of being diagnosed with the disorder reported at 10-25% for women and from 5-12% for men (APA, 2000).

In this study, the association between social distance and beliefs as to the causes of depression will be examined. Social distance is often used as a measure of stigmatizing attitudes held by others toward those with mental illness. For the purpose of

the present study, social distance is defined as interactions that do not provide emotional assistance or esteem and indicate a lack of willingness to associate with other individuals.

Lay Beliefs as to the Causes of Mental Illness

A number of studies, most often focused on schizophrenia and/or depression, have examined what laypersons believe to be the causes of mental disorders. In multiple studies conducted outside the United States, laypersons have typically viewed depression as being caused primarily by psychosocial (e.g., stress, job loss, etc.) rather than biological factors. For example, using a nationally representative sample, Angermeyer and Matschinger (2003) found that adult German citizens considered depression to be caused primarily by psychosocial factors such as stress in the workplace. Schizophrenia was also seen by the sample as more likely to be caused by psychosocial rather than biological factors. However, respondents in the sample did view schizophrenia as more likely to involve biological dysfunction than depression.

Schomerus, Matschinger, and Angermeyer (2006) reported individuals in Germany endorsed the belief that depression is caused primarily by psychosocial factors while schizophrenia is caused primarily by biological factors. Similar results were found by Lauber, Falcató, Nordt, and Rössler (2003), whose research suggested a significant number of individuals living in Switzerland believed psychosocial factors, primarily those originating in the workplace and at home, to be the causes of depression.

Using a random sample from the Dutch national telephone book, van 't Veer, Kraan, Drosseart, and Modde (2006) administered a questionnaire to the respondents asking what degree certain factors attributed to the cause of mental illness in general. Subjects were given six possible causes of mental illness and were directed to report how

much they believed each to result in the development of a mental disorder, choosing from “regularly,” “often,” “sometimes,” “rarely,” or “never.” The Dutch respondents noted multiple potential causes of mental illness, with the most frequently endorsed potential causes being sexual abuse (78.9%), brain dysfunction (74.7%), and substance abuse (70.9%). Slightly over one half of the individuals attributed mental illness to genetic transmission (53.6%). One difficulty of this study, in terms of the present paper, is that “mental illness” was used as a general description. Therefore, it is unknown whether the (relatively high) endorsement of “brain dysfunction” as a potential cause of mental illness found in the study would have varied had respondents been asked separately about schizophrenia and depression.

Mulatu (1999) interviewed 450 adults from northwestern Ethiopia to assess their beliefs and attitudes concerning the causes and treatments of mental and physical illnesses. Nine vignettes were presented to the participants describing an individual with one of the nine major illness conditions, which were depression, anxiety, alcoholism, schizophrenia, mental retardation, epilepsy, tuberculosis, leprosy, and poliomyelitis paralysis. Subjects rated how important certain factors were to the cause of the illness on a three-point scale, selecting from “not important/responsible,” “somewhat important/responsible,” or “very important/responsible.” Mulatu noted psychosocial stressors were held more responsible for mental disorders such as depression, anxiety, alcoholism, schizophrenia, mental retardation, and epilepsy than it was for physical disorders such as tuberculosis, leprosy, and poliomyelitis paralysis. It was also noted that individuals viewed supernatural retribution, such as possession by evil spirits or punishment by the normally benevolent Supreme Being, as more likely to cause mental

than physical illness.

Adewuya and Oguntade (2007), in Western Nigeria, assessed medical doctors' beliefs concerning causes of mental illness in general. Participants were presented with 12 potential causes of mental illness and asked to rate the relevance of each cause by selecting from "not a cause," "rarely a cause," "likely a cause," and "definitely a cause." The sample most often endorsed psychosocial causes for mental illness. The most frequently endorsed cause of mental illness was drugs/cannabis/alcohol abuse (67.9%). The second most supported cause of mental illness was personal, financial, or marital stress (58.3%), followed by evil spirit/witchcraft/sorcery (53.8%). These findings, as well as the ones noted above by Mulatu (1999), illustrate that causal beliefs concerning mental illness can be influenced by cultural beliefs and thus vary across cultures. As noted above, respondents in industrialized nations generally support biological or psychosocial causes of mental illness and do not typically suggest "witchcraft" or "sorcery" as potential causes.

Jorm, Christensen, and Griffiths (2005b) conducted a study in Australia, utilizing a nationally representative sample, which examined whether beliefs regarding the causes of mental disorders had changed from 1995 to 2004. The researchers provided each respondent with a vignette depicting an individual suffering from either depression or schizophrenia. After reading the vignette, the subjects were provided with a list of possible causes of the mental illness depicted. Participants then chose how likely it was that each cause led to the mental illness depicted, selecting from "don't know," "depends," "not likely," "likely," or "very likely." In the initial study, both depression and schizophrenia were most often seen to be caused by day-to-day problems (94.4% and

92.8%, respectively). Other psychosocial causes such as “traumatic events” were also viewed as likely causes of depression and schizophrenia (90% and 84.6%, respectively). In contrast, inherited or genetic problems were less-frequently endorsed as likely causes of depression (49.1%) and schizophrenia (59.3%).

In the follow-up study conducted in 2003-2004 (Jorm et al., 2005b), in which a nationally representative sample was also utilized, respondents again frequently endorsed day-to-day problems as likely causes of depression (97.1%) and schizophrenia (89.6%). However, increases were seen in the endorsement of genetics as a likely potential cause of depression and schizophrenia; 67.4% of the 2003-2004 endorsed genetics as a likely cause of depression (vs. 49.1% in the initial study), and 70% endorsed genetics as a likely cause of schizophrenia (vs. 59.3% in the initial study). It thus appears that Australian adults, while still viewing psychosocial factors as most likely to cause depression, now also view genetics as an important potential cause of depression.

As discussed above, multiple studies outside the United States have often found psychosocial factors to be endorsed more strongly as likely causes of depression than biogenetic factors. Findings concerning causal beliefs with respect to schizophrenia have been more mixed, with respondents sometimes viewing biogenetic causes as most important and sometimes viewing psychosocial factors as most important. Though schizophrenia is not the focus of the present study, schizophrenia-related findings found in the above studies were discussed in order to illustrate that a) causal beliefs might vary across disorders (i.e., in depression vs. schizophrenia), b) causal beliefs can vary across cultures and countries, and c) cultural narratives appear to play a rather large role in influencing lay beliefs held as to the causes of mental disorders, as illustrated by the

Adewuya and Oguntade (2007) and Mulatu (1999).

Only a few studies in the United States have examined lay causal beliefs concerning mental illness. In the only study found that used a nationally representative sample, Link, Phelan, Bresnahan, Stueve, and Pescosolido (1999) investigated lay causal beliefs concerning schizophrenia, major depressive disorder, alcohol dependence, drug (cocaine) dependence, and a “troubled person” with subclinical problems and worries. The researchers utilized vignettes depicting each of the above and asked the sample how likely it was that each of several potential causes might lead to the disorders. Possible causes included the person’s own bad character, a chemical imbalance in the brain, the way the person was raised, stressful circumstances in the person’s life, a genetic/inherited problem, and God’s will. Link et al. found that stressful circumstances were most often endorsed as potential causes of each of the disorders noted above. More specifically, 94.8% of the participants viewed stressful circumstances as a potential cause of major depressive disorder, followed by “a chemical imbalance in the brain” (72.8%), a “genetic or inherited problem” (52.9%), and the “way a person was raised” (47.6%). In contrast to studies done outside the United States, respondents in the Link et al. study appeared to be much more likely to consider “chemical imbalances” as an important potential cause of depression.

In another study, involving lay causal beliefs, that partly replicated the methods used by Link et al. (1999), France, Lysaker, and Robinson (2007) asked a convenience sample of 262 university students a number of questions concerning the potential causes of depression. The participants in the study were asked about the likelihood (“very likely” to “very unlikely”) that depression might be caused by each of the seven factors

presented by Link et al. (1999). The sample most often endorsed “recent or ongoing stressful circumstances” (98.1%), “difficult childhood experiences” (85.5%), and “an imbalance of chemicals in the brain” (84.7%) as likely causes of depression. Regarding the latter finding, the authors noted that the “chemical imbalance” explanation is widely transmitted to consumers in the United States via direct-to-consumer (DTC) advertisements for antidepressant drugs, that such ads are prohibited in most other industrialized nations, and that such marketing practices might affect lay beliefs as to the causes of depression (France et al., 2007). The authors also noted that 91.6% of the sample reported previous exposure to the “chemical imbalance” explanation for depression, most often via television, and that such exposure may be related to the relatively high level of endorsement of this biological (i.e., chemical imbalance) cause of depression found in the sample.

In sum, individuals outside the United States have most often endorsed psychosocial factors as the most important causes of depression. In very limited research conducted in the United States, individuals have also tended to more strongly endorse psychosocial rather than biological causes for depression. However, United States respondents appear to differ from those outside the United States in at least one way: Persons in the United States appear much more likely than those outside the United States to endorse one specific biological cause for depression, that of a “chemical imbalance,” and to endorse this cause at levels relatively close to the highest-ranked psychosocial causes for depression.

Stigma, Attributions, and Causal Beliefs in Depression

Stigma and Depression

When considering mental health, stigma can be described as the perception that an individual with a mental illness is weak, flawed, dangerous, and socially incompetent (Wahl, 2003; Wahl & Harman, 1989). When individuals with mental illness are stigmatized, this frequently results in negative thoughts, feelings, and/or behaviors being expressed toward them. Negative thoughts can involve perceptions of dangerousness and unpredictability; negative feelings can involve anger, fear, or dislike; and negative behaviors can include an increased desire for distance from the mentally ill person as well as a reduced willingness to offer supportive behaviors. Stigmatizing attitudes and related behaviors toward people with mental disorders have been well-documented in numerous research studies (Barney, Griffiths, Jorm, & Christensen, 2005; Dietrich, Matschinger, & Angermeyer, 2006; Gaebel, Baumann, Witte, & Zaeske, 2002; Martin, Pescosolido, & Tuch, 2000; Walker & Read, 2002). This is related to the treatment of depression because stigmatizing attitudes may lead individuals to vary their behaviors when interacting with depressed persons; for example, those who hold stigmatizing attitudes may be less likely to offer social support toward, and report an increased desire for social distance from, those with mental illness.

At least two types of stigma are relevant to depression and other mental disorders. “Perceived stigma” involves stigmatizing attitudes held by others toward persons suffering from mental disorders. A second form of stigma, “self stigma,” exists when persons internalize the stigmatizing attitudes held toward them by others. Self stigma leads individuals to form negative attitudes toward themselves. Perceived and self stigma

both reduce the likelihood that an individual will seek professional help in order to cope with depression (Barney et al., 2005). Halter (2004) suggests stigma can worsen depression by worsening the feelings of global negativity and low self-esteem often experienced by depressed persons.

Social Support and Depression

Social support can be defined as interpersonal interactions that provide individuals with esteem, stress-related aid, and emotional assistance. Multiple studies have demonstrated that the experience and perception of social support from others aids in the rehabilitation of depression (Dobkin, Panzarella, Fernandez, Alloy, & Cascardi, 2004; Koizumi et al., 2005; Leskela et al., 2006; Milevsky, 2005; Panzarella, Alloy, & Whitehouse, 2006). For example, Simpson, Haines, Lekwuwa, Wardle, and Crawford (2006) reported a significant negative correlation between depression and social support as well as a significant positive correlation between positive affect and social support. Warren (1997) explored the link between social support and depression in African American women and also found a significant negative correlation between social support and scores on scales measuring depression levels.

Social support is generally seen as beneficial in cases of depression and other mental as well as physical disorders. However, it should also be noted that both the perceived quality of the social support as well as whom is offering the support can influence how beneficial such support is in helping one cope with illness. Regarding the former, Vandervoort (1999) found a significant negative correlation between personal satisfaction with social support received and scores of depression, both recent and chronic. He argued that perception of the quality of social support is often more

important with respect to health outcomes than the quantity of social support offered or perceived. Simpson et al. (2006) similarly reported that dissatisfaction with the quality of social support perceived was positively correlated with psychological distress among individuals diagnosed with Parkinson's disease in the United Kingdom. Riemsma et al. (2000) found that problematic social support, defined as experiences of support that are perceived as non-supportive despite the possibility of good intentions by the provider, was associated with greater feelings of depression in patients with rheumatoid arthritis.

As noted above, the potential benefits of social support in cases of mental illness might also vary according to whom is providing such support. Stice, Ragan, and Randall (2004) reported parental support may have greater significance in predicting future decreases in depressive symptoms for adolescent girls versus the social support of peers. Bertera (2005) found that social negativity with relatives, including spouses, had a stronger association with mental health than negative social interactions with friends. Bertera also found that both positive and negative social support offered by relatives and spouses affected mentally ill persons to a greater extent than social support (whether positive or negative) offered to the person by friends. Of interest, Stice et al. (2004) also discovered that initial major depression as well as depressive symptomology predicted a decrease in the perception of support by peers, but no change in perceived parental support. This suggests familial social support may be more consistent across time than support from peers, and that familial social support might prove to be more beneficial for depressed persons than support from peers. As well, Stice et al.'s findings suggest the possibility that stigma and related behaviors (e.g., social distance) might vary depending upon whether the mentally ill person being considered is a family member versus a

member of one's peer group, or a stranger versus family member or member of one's peer group.

Social Distance and Mental Illness

As demonstrated above, the reception of social support is beneficial to those suffering from depression. Therefore, it can be assumed that remaining socially distant from those with depression would likely be detrimental to treatment outcomes. Factors associated with increased desire for social distance from those with mental disorders will be examined next.

There is evidence that laypersons sometimes or often report an increased desire for social distance from those experiencing a mental illness. For example, Lauber, Nordt, Falcató, and Rossler (2004) conducted telephone interviews with 1737 Swiss adults and asked participants to indicate their willingness to interact with an individual suffering from symptoms resembling those seen in schizophrenia or depression. Respondents who suggested the symptoms were part of a "mental illness" reported a desire for more social distance than did those respondents who endorsed the symptoms as likely resulting from a "crisis" (Lauber et al., 2004).

Ozmen et al. (2004) studied how individuals residing in Turkey perceived those suffering from depression and how this affected their desire for social distance. The subjects' attitudes toward those diagnosed with depression were highly negative. Half of the subjects would not marry a depressed person and nearly half of the participants would not rent a room or work with a depressed individual. One quarter of the subjects stated individuals with depression should not be free in the community. Though these results would not likely be fully replicated in other industrialized nations, they do illustrate that

depressed persons can be stigmatized and avoided, and that cultural beliefs concerning mental illness may play a role in influencing attitudes toward those with mental health disorders.

Perceived dangerousness has often been found predictive of the amount of distance individuals might desire from those with mental illness. For example, using a nationally representative sample of German laypersons, Angermeyer, Matschinger, and Corrigan (2004) reported a strong and direct relationship between perceived dangerousness of the mentally ill person being considered and social distance. Grausgruber, Meise, Katschnig, Schony, and Fleischhacker (2007) also used a nationally representative sample and found that laypersons in Austria viewed those with schizophrenia as more dangerous than people without schizophrenia, and that perceived dangerousness was the most critical element determining the amount of social distance one would desire from someone with schizophrenia.

Lower levels of perceived dangerousness appear to reduce the amount of social distance desired from depressed or schizophrenic persons, and familiarity with and an understanding of mental disorders appears related to such reduced perceptions of dangerousness. Angermeyer et al. (2004) examined the hypothesis that an increase in familiarity with mental illness would lead to reduced perceptions of dangerousness. The authors found that individuals who were more familiar with mental disorders did indeed perceive people with mental illnesses to be less dangerous (than individuals less familiar with mental disorders), and that such reduced perceptions of dangerousness were associated with a decreased amount of social distance desired from the mentally ill persons. Corrigan, Green, Lundin, Kubiak, and Penn (2001), utilizing a convenience

sample of United States college students as participants, also found individuals more familiar with mental disorders to be less discriminatory toward those with mental illness. The above findings are consistent with studies of mental health professionals; for example, it appears that most psychiatrists agree that persons with mental illness pose much less of a danger than many laypersons believe (Kingdon, Sharma, Hart, & The Schizophrenia Subgroup of the Royal College of Psychiatrists' Changing Minds Campaign, 2004).

Attribution Theory

Causal beliefs may affect levels of stigma as well as both treatment-seeking behaviors and outcomes in depression. According to Weiner's (1995) attribution theory, beliefs about the cause and controllability of a certain event or situation lead to a determination of responsibility for the event or situation. When it is believed that an event or situation is the result of forces under an individual's control, this person will often be held responsible for the event. In this instance, others can feel anger toward that individual due to the person having the ability to change the situation. For example, if a person's depression is seen to be caused by psychosocial factors under the person's control (e.g., voluntary abuse of drugs), the person may be held responsible for depression, disliked for failing to change the behaviors causing the depression, and so forth. Conversely, if a situation is thought to be caused by factors outside the person's control (an example would be depression caused by biological factors not under the control of the individual), less responsibility for the situation will be placed upon the individual. Such an attribution should also lead others to feel pity for the individual and be more willing to offer support and assistance to help the afflicted person.

Causal Beliefs/Attributions and Stigma

Attribution theory, as described above, appears directly relevant to efforts to improve outcomes in depression and other mental disorders by reducing stigmatizing attitudes and improving the willingness of others to offer social support and other helpful interactions to those suffering from mental disorders. In this section, studies related to causal attributions as they have been found to affect stigmatizing attitudes and related behaviors in depression and (to a lesser degree) schizophrenia will be discussed.

In New Zealand, Breheny (2007) examined the relationships between types of mental illness, genetic attributions for mental illness, and social distance. A vignette was presented to 232 individuals that depicted a person suffering from skin cancer, schizophrenia, or depression. A description of the illness was also provided in which the illness was described as having a genetic basis, no genetic basis, or no causal explanation. Participants reported a desire for less social distance when schizophrenia was given a genetic versus psychosocial cause; however, participants reported a desire for more social distance when depression was described as genetically caused versus having a psychosocial cause.

Dietrich et al. (2003) presented vignettes depicting mentally ill persons to participants in Germany, Russia, and Mongolia and examined the relationships among causal beliefs, type of illness depicted, and social distance. The persons depicted in the vignettes were experiencing symptoms consistent with either schizophrenia or major depression. The authors found a positive relationship between social distance and perceptions that the disorders were caused primarily by biological factors; that is, participants who endorsed a biological cause for schizophrenia or depression reported a

desire for more distance from the afflicted persons depicted in the vignettes than did participants endorsing psychosocial causes for the disorders.

Walker and Read (2002) employed a sample of undergraduate mathematics students at a New Zealand university and found that when mental illness was attributed to biogenetic causes, participants significantly supported that the mentally ill were dangerous and unpredictable. Similarly, Dietrich et al. (2006) tested the hypothesis that supporting biological factors (e.g., brain disease, genetics) as causes of mental illness would lead others to view those afflicted with schizophrenia and major depression as lacking in self control. The hypothesis was supported in this study and the authors suggested the afflicted individuals might be considered dangerous and unpredictable and lead others to remain socially distant from them. Regarding depression specifically, the authors found a strong positive association between endorsing biological factors as the cause of the disorder and the perception of dangerousness, which in turn was related to a greater desire for social distance from the depressed person depicted in the study.

In the studies discussed above, views of mental illness as being caused by biogenetic factors were associated with negative perceptions of the mentally ill and an increased desire for social distance. Such findings also suggest endorsement of psychosocial causes for mental illness might decrease laypersons' desire for social distance. This was found to be the case by Angermeyer and Matschinger (2003), who demonstrated that stronger beliefs in psychosocial factors as causing depression or schizophrenia resulted in increased pity for, decreased anger toward, and reduced perceptions of dangerousness of those suffering from either mental disorder.

As noted previously, Weiner's (1995) attribution theory would suggest that

perceptions of depression as being caused by uncontrollable factors (i.e., biological dysfunction or genetics) should lead persons to hold less stigmatizing attitudes toward those with depression, and be more willing to move toward and offer support to those with depression. However, in the multiple studies discussed above the opposite has generally been found; perceptions that others' depression resulted from biogenetic rather than psychosocial causes has typically been associated with increased stigma, a desire for more social distance from the depressed person, and a lower willingness to offer socially supportive behaviors. Careful readers may recognize that almost all the studies discussed above took place outside the United States.

It is possible but unclear whether causal beliefs might impact social distance in a different manner in the United States than outside the United States. In one important study conducted in the United States, Feldman and Crandall (2007) analyzed which characteristics of mental disorders most frequently result in stigmatizing behaviors and attitudes. The authors created 40 vignettes of mental disorders and presented them to 281 United States undergraduate students in an introductory psychology course. Each participant received two vignettes, each of which contained a brief description of the mental illness and the afflicted individual along with a diagnostic label, likely causes, and likely outcomes with treatment of the disorder. The results of the research demonstrated three main predictors of social distance: personal responsibility, perceived dangerousness, and rarity of the disorder. Personal responsibility explained the largest amount of variance in social distance, followed by perceived dangerousness and rarity. In other words, participants were more rejecting of the afflicted person when they believed the person was responsible for the disorder, and less rejecting when the cause

was assumed to be outside the person's control (as might be the case when the disorder was caused by biogenetic factors). This finding is consistent with Weiner's (1995) attribution theory, as discussed above, but relatively inconsistent with many findings (discussed earlier) derived from studies outside the United States, where social distance typically increased when biogenetic causes for the disorder were given or endorsed. Such findings, including inconsistencies in findings across countries, are relevant and important not only to general outcomes in depression but also to public awareness campaigns seeking to improve outcomes in depression by reducing stigma.

Public Awareness Campaigns and Depression

Currently, multiple public awareness campaigns aimed at consumers attempt to reduce the stigma surrounding mental disorders such as depression. The goals of such campaigns include the changing of potentially harmful beliefs and behaviors related to mental disorders and their treatment. First, such campaigns outside the United States will be discussed followed by comparing and contrasting such campaigns with those seen inside the United States.

Public Awareness Campaigns Outside the United States

In Britain, the Royal College of Psychiatrists' anti-stigma campaign, *Changing Minds: Every Family in the Land* was developed in order to educate the public regarding mental illnesses so that many of the false beliefs regarding the frequency, the causes, and the treatment of mental illness could be corrected. It contended mental disorders were commonly diagnosed and were caused by the interaction of both genetic and psychosocial influences. The campaign stressed a holistic approach to the treatment of mental illness, suggesting medication, psychotherapy, and social support were each

important components in the successful treatment of mental disorders. This campaign was targeted toward persons with a diverse range of ages, ethnicity, and social backgrounds (Pilgrim & Rogers, 2005).

Though specific data concerning the effectiveness of the above campaign could not be found, a number of other public awareness campaigns and related studies conducted outside the United States suggest such campaigns can impact public attitudes toward those with mental illness. The *Like Minds, Like Mine* campaign in New Zealand was found useful in reducing stigmatizing attitudes among the general public toward those with mental illnesses (Vaughan & Hansen, 2004). The campaign began in 1997 as a result of Judge Ken Mason sending an inquiry to the government recommending funding of a public education campaign to reduce discrimination toward the mentally ill (LikeMinds, 2007). The campaign desires to reduce stigma and discrimination toward those with mental illness and thus establish an environment in society that both values and includes such individuals suffering from mental illness. (Vaughan & Hansen, 2004). A variety of media (television and radio announcements, print materials, and so forth) were utilized to communicate messages related to understanding that mental illness is relatively common and that negative stereotypes can be harmful to those with mental illness.

Tanaka, Ogawa, Inadomi, Kikuchi, and Ohta (2003) also found that programs educating the public concerning those with mental illness could lead to changes in attitudes (and potentially, behaviors) toward those with mental illness. In a series of educational programs presented to industrial workers and government employees in Japan, speakers suggested mental illness is both relatively common and often brain-

based, that mental illness can be likened to other medical conditions, and that medication is effective in treating mental illness. Following the programs, participants endorsed similar beliefs at significantly higher levels than they had prior to the lectures.

Beyondblue: the national depression initiative, was established in Australia in order to facilitate an improved response to depression throughout the Australian community (Jorm, Christensen, & Griffiths, 2005a). The campaign asserts that there are many causes of depression including both psychosocial and biological factors. Some examples of these factors are divorce, death of a loved one, family history, and changes in brain chemicals (Beyondblue, 2007). There are five areas of priority for the campaign, which are:

increased community awareness and reduced stigma, through both mass media and internet-based interventions and targeted community, school, and work-place-based education and information strategies; greater consumer and carer participation and confrontation of social, structural and legislative barriers, testing of depression prevention and early intervention programs, primary care workforce training linked with financial and structural reform, and support for research to guide health service reform (Hickie, 2004, p. 39).

Research regarding this campaign has found that it produces a change in beliefs regarding treatment for depression, such as the benefits of counseling, medication, and help-seeking (Jorm, Christensen, & Griffiths).

In the latter three campaigns discussed above, stigma and other public attitudes toward those with mental illness were modified via public service announcements and other forms of education. However, each campaign asserted a different cause for mental

disorders in an effort to reduce stigma. Therefore, a remaining question is whether stigmatizing attitudes are best reduced by suggesting depression is caused by biogenetic factors, psychosocial factors, or a combination of the two. In contrast to campaigns outside of the United States, organizations within the United States often stress primarily biological causes of mental disorders in hopes of reducing stigma and improving outcomes in depression.

Public Awareness Campaigns Inside the United States

The two most prominent public awareness campaigns in the United States concerning mental illness, those developed by the National Institute of Mental Health (NIMH) and the National Alliance on Mental Illness (NAMI), currently stress biology as the most important cause of mental illnesses such as depression and schizophrenia. Though the goals of such campaigns—that is, reduced stigma, increased social support, and improved outcomes in depression—are similar to those of campaigns outside the United States, the relative foci on biological causes of mental illness is a departure from such campaigns.

The National Institute of Mental Health (NIMH) was established in 1946 with the mission of “promoting and supporting research, training, and services directed at the causes, treatment, and prevention of mental illness” (Pardes, 1983, p. 1355). The organization was created due to increasing concerns regarding widespread mental health problems and the lack of professionals trained in the area of mental health. These concerns arose, in part, due to an increasing rate in psychiatric rejections of individuals being assessed for military service during World War II. Wartime discharges for psychiatric difficulties, post-war increases in trauma-related psychopathology, and

increasing numbers of patients residing in state mental hospitals also influenced the need for and growth of NIMH (Pardes, 1983).

Today, NIMH continues to support its mission and attempts to educate the public as to the causes and appropriate treatments of mental disorders such as depression. The public awareness information put forth by NIMH contends that major depression is often found within families and is frequently “associated with changes in brain structures or brain function” (NIMH, 2006, p. 3). In other words, NIMH stresses that depression is likely a disorder of the brain rather than being caused primarily by psychosocial factors.

The National Alliance on Mental Illness (NAMI) is another organization that seeks to educate the public of the United States concerning mental disorders, with the goal of reducing stigmatizing behaviors and increasing social support. During the 1960s and 1970s, family members, particularly parents, often received a great deal of blame for causing mental disorders. “Families across the country began to compare notes with one another regarding their experiences of being scapegoated and left out of the treatment plans” (Foulks, 2000, p. 360). Beverly Young and Harriett Shetler, two parents who each had a child diagnosed with schizophrenia, arranged the first meeting of NAMI after discovering a lack of resources available to help families cope with mental disorders (Foulks, 2000).

The organization grew over time and has for some time sought to educate the public concerning mental illness. As does the NIMH, NAMI suggests depressive illness is most likely caused primarily by biological factors. The organization maintains, while depression does not have one single cause, research has “firmly established that major depression is a biological, medical illness” (NAMI, 1996, p. 2). An example of a slogan

established by NAMI is, “Mental illnesses are disorders of the brain just like other illnesses are disorders of other organs” (Foulks, 2000, p. 364). Further, NAMI explains “scientists believe that if there is a chemical imbalance in neurotransmitters, then clinical states of depression result” (NAMI, 1996, p. 2).

Both NIMH and NAMI, along with the individual campaign in Japan discussed previously, emphasize that depression is primarily caused by biological processes. It is hoped that laypersons will respond to this message (that the cause of depression is biogenetic and thus not under the control of the afflicted person) by offering more social support for depressed individuals and otherwise reducing stigma toward such persons. It is less than clear whether such campaigns are or will be optimally effective in reducing stigma toward, increasing social support for, and reducing social distance from depressed persons in the United States. As discussed above, several large public awareness campaigns conducted outside the United States have emphasized a combination of psychosocial and biogenetic causes for depression, and have also suggested appropriate treatment can include both counseling as well as medication. Several such campaigns have been shown to effectively reduce stigmatizing attitudes and behaviors toward those with depression. As well, biogenetic explanations have been associated with an increased rather than decreased desire for social distance from those with mental illness in several studies (e.g., Breheny, 2007; Dietrich et al., 2003; Dietrich, Matschinger, & Angermeyer, 2006; Lauber, Nordt, Falcató, & Rossler, 2004).

The present study explores the relationship between causal explanations for depression and social distance. Specifically, the current research seeks to determine whether individuals’ desire for social distance from persons with depression is influenced

by the presented (biological vs. non-biological) cause of the depression. This research aims to provide information relevant to the following question: Will individuals report a greater desire for social distance from depressed persons when the cause of the depression is described as resulting from biological versus non-biological causes? If this is found to be the case, then it can be suggested that current large-scale public awareness campaigns related to depression might benefit from altering their current message as to the cause(s) of depression. As well, the research also seeks to determine whether desired social distance might vary according to the relationship (friend vs. family member vs. stranger) one might have with the depressed person. Such information might also be helpful to individuals seeking to influence, via public awareness campaigns, attitudes toward those with depressive illness.

CHAPTER III

METHODS

Participants

Participants in this study were 223 students attending a state university located in the urban center of a large Midwestern city. Of the participants who reported their gender, 140 (62.8%) were women and 79 (35.4%) were men. The sample was relatively diverse with respect to age, ethnicity, education level, and income. Average age of the sample was 23.97 years ($SD = 6.35$), with a range from 18 to 68 years. Approximately 58% of subjects were White ($n = 129$ of 215 valid responses), 17.9% ($n = 40$) were African American, and the remaining participants reported their ethnicity as Hispanic/Latino (5.4%; $n = 12$), Multiracial (4.9%; $n = 11$), Asian (4.5%; $n = 10$), Indian/Middle Eastern (4.5%; $n = 10$), or “other” (1.3%; $n = 3$). A total of 215 participants reported their annual household income; of these, 69 (30.5%) were of lower income status (defined as \$24,999 or less), 91 (40.3%) were of middle income status (\$25,000-\$75,000), and 44 (19.5%) had annual household income of \$75,000 or above.

When reporting academic status, the subjects appeared to be rather balanced between freshman, sophomore, junior, senior, and post-baccalaureate/graduate student status. A total of 213 participants reported their academic status; of these, 64 (28.3%) were freshman, 45 (19.9%) were sophomores, 35 (15.5%) were juniors, 34 (15.0%) were seniors, 6 (2.7%) were post-baccalaureates, and 29 (12.8%) were graduate students.

Apparatus

An informed consent form was utilized (see Appendix A), along with four vignettes (see Appendix B), six surveys (see Appendix C), and a Scantron (“bubble”) sheet in this study. The informed consent form described the basic purpose of the study (to investigate certain beliefs concerning depression), assured participants of anonymity, and asked for written consent to participate in the study.

The vignettes utilized in the study each depicted an adult suffering from symptoms consistent with Major Depressive Disorder (MDD). Each vignette began with the name of the character, which was either male or female, and described the depressive symptoms the person was experiencing. The vignettes were utilized to create the belief that the depression was the result of either biological or psychosocial causes. In each vignette, the depicted person consulted a physician, who then diagnosed the person as suffering from depression and provided information as to the likely cause of the depression. In approximately half of the vignettes, the physician described the likely cause of the depression as being an “imbalance of certain brain chemicals” and then prescribed antidepressant medication. In the remaining vignettes, the physician also diagnosed the depicted person as suffering from depression, asked the person to undergo a complete physical and other appropriate medical tests, and reported that the tests did

not reveal any specific biological or chemical cause for the depression. The first non-demographic item of the surveys (described in more detail below) utilized in this study asked participants what type of cause (biological, non-biological, a combination, or none of the above) was described in the vignette as the cause of the individual's depressive symptoms. This item was designed to check whether manipulation of the independent variable (i.e., beliefs as to the cause of the described depression) occurred in a reasonable manner and that subjects' beliefs were consistent with the vignettes they received.

The six surveys utilized in this project included the above item and demographic items asking about age, gender, ethnicity, education level, and family income. Each survey also contained 20 Likert-type items derived from a modified form of the Bogardus Social Distance Scale (SDS) constructed by Link, Cullen, Frank, and Wozniak (1987). The SDS as modified by Link et al. contains seven items and is designed to measure the amount of social distance one would desire from a hypothetical person with mental illness. Though reliability and validity estimates for the SDS have not been reported, the scale has been used extensively as a measure of social distance (Angermeyer & Matschinger, 2004; Angermeyer, Matschinger, & Corrigan, 2004; Corrigan, Green, Lundin, Kubiak, & Penn; 2001; Dietrich, Matschinger, & Angermeyer, 2006).

The seven original questions of the modified SDS were included in the surveys utilized in this study. These seven items were modified in order to create two additional sets of questions; here, the hypothetical person described in the original seven items was instead described as a friend (seven items) or family member (six items). Participants responded to these items according to a 5-point Likert-type scale ranging from 1 ("definitely yes") to 5 ("definitely not"). The original and modified questions resulted in

three sets (stranger, friend, and family conditions) of items, with the total 20 items appearing on each survey. In order to reduce potential bias due to the order of the Likert-scaled items, the order of the three sets of questions were rotated so that each set of items appeared first, second, or last in essentially equal numbers across the sample. Such rotations required six surveys in which the items, but not the order of their appearance, were identical.

Procedure

The surveys, vignettes, and informed consent forms were each distributed to the subjects during class time with the help of their professors. The subjects first received the informed consent forms, which were signed and returned to either the researcher or the professor. Subjects then received the survey and the vignette and were instructed not to sign either of these materials. Both the survey and the vignette remained separate from the informed consent forms; therefore, the surveys remained anonymous.

The six surveys were arranged in repeating order from one to six and the four vignettes were arranged in repeating order from one to four. Surveys and vignettes were then paired. The first survey was paired with the first vignette, the second survey with the second vignette, and so on. As there were six surveys and only four vignettes, the fifth survey was paired with the first vignette, the sixth survey was paired with the second vignette, and so on. This ordering of survey-vignette pairs was maintained when distributing these materials.

Before conducting any of the primary inferential tests of interest, a series of *t*-tests were utilized in order to examine whether mean responses to each of the three sets (subscales) of questions varied according to the gender of the person depicted in the

vignette. In other words, mean responses to the female-biological cause and male-biological cause vignettes for each subscale were compared. This same comparison was also conducted with the vignettes describing depression as lacking any clear biological cause. The means for each subscale (depicting the amount of social distance an individual would desire from strangers, friends, and family, respectively) did not differ by gender ($p > .05$). As a means of potentially increasing the power of the primary inferential tests, the responses to the male and female vignettes based on the depicted cause (biological or non-biological) of the depression were combined. This left one independent variable utilized in the subsequent inferential tests, that of depicted cause (biological or non-biological) of the depression.

CHAPTER IV

RESULTS

A total of 223 respondents provided usable surveys. Demographic information concerning the sample is reported above. Table I illustrates that relatively (though not exactly) equal numbers of respondents were exposed to each of four possible vignette conditions (female or male with either a biological cause for the depression or no biological cause for the depression). As noted above, the first non-demographic item of the survey asked participants to verify the cause of the depression described in their vignettes. Of 220 respondents to this item, 180 (81.8%) correctly identified the cause of the depression as described in their respective vignettes.

Table I

Subjects in Each Condition (Gender of Sufferer and Described Cause of Depression)

Condition (total $n = 221$)	n	%
Female, biological cause	60	27.1
Female, psychosocial cause	61	27.6
Male, biological cause	52	23.5
Male, psychosocial cause	48	21.7

Before conducting inferential tests, descriptive data were organized for each of the dependent variables. Tables II, III, and IV provide descriptive statistics for the individual questions measuring social distance from strangers, friends, and family members, respectively; overall means and standard deviations for each subscale are also reported in the noted tables. Internal consistency of the items contained in each of the three subscales was assessed using Cronbach's alpha. Results suggested good internal consistency of the items in each of the three subscales, with alpha equal to .87 for the Strangers subscale, .81 for the Friends subscale, and .79 for the Family Members subscale.

Table II

Social Distance from Strangers: Descriptive Statistics

Question	Mean	SD
Would you rent out a room to somebody with these problems?	2.73	1.02
Would you accept a person like this as your coworker?	2.39	0.94
Would you accept a person like this as your neighbor?	1.96	0.85
Would you hire this person for taking care of your kids for a few hours?	4.05	0.98
Would you accept a person like this as an in-law?	2.17	0.95
Would you introduce someone like this to your friends?	2.46	1.02
If a friend of yours was looking for an employee, would you recommend a person like this?	2.43	1.00
Overall (all questions combined)	19.19	5.06

Note. Total number of responses to each item was 221.

Table III

Social Distance from Friends: Descriptive Statistics

Question	Mean	SD
If this person were a friend, would you rent out a room to this person?	2.22	0.96
If this person were a friend, would you accept a person like this as your coworker?	2.10	0.95
If this person were a friend, would you accept a person like this as your neighbor?	1.71	0.74
If this person were a friend, would you hire this person for taking care of your kids for a few hours?	3.55	1.10
If this person were a friend, would you accept a person like this as an in-law?	2.00	0.88
If this person were a friend, would you introduce them to your other friends?	1.89	0.81
If this person were a friend and another friend of yours was looking for an employee, would you recommend this person?	3.03	0.92
Overall (all questions combined)	16.50	4.40

Note. Total number of responses to each item was 222.

Table IV

Social Distance from Family Members: Descriptive Statistics

Question	Mean	SD
If this person were a family member, would you rent out a room to somebody with these problems?	1.85	0.92
If this person were a family member, would you accept a person like this as your coworker?	2.00	0.97
If this person were a family member, would you accept a person like this as your neighbor?	1.52	0.70
If this person were a family member, would you hire this person for taking care of your kids for a few hours?	3.18	1.24
If this person were a family member, would you introduce them to your friends?	1.86	0.85
If this person were a family member and a friend of yours was looking for an employee, would you recommend this person?	2.84	1.02
Overall (all questions combined)	13.24	4.06

Note. Total number of responses to each item was 223.

By conducting a multivariate analysis of variance (MANOVA), it was possible to simultaneously examine whether a significant difference exists between the three dependent variables (social distance from strangers, friends, or family members) and the cause of depression that was depicted in the vignette (biological or non-biological). The three dependent variables were correlated in a moderate-to-high manner, and such correlations were statistically significant (see Table V). The MANOVA analysis did not detect any significant relationship between the cause of the depression depicted in the vignette and social distance desired from the three groups of individuals (Wilks Lambda = .972, $p = .106$). Table VI shows the results of the MANOVA analysis.

Table V

Correlations Between Dependent Variables

	Social distance from strangers	Social distance from friends	Social distance from family members
Social distance from strangers		0.748*	0.569*
Social distance from friends	0.748*		0.751*
Social distance from family members	0.569*	0.751*	

* $p < .01$, two-tailed

Table VI

MANOVA of Causes of Depression with the Social Distance from Strangers, Friends, and Family Members

Effect	Value	<i>F</i>	Hypothesis <i>df</i>	Error <i>df</i>	Significance
Cause of depression					
Wilks Lambda	0.972	2.064	3	217	0.106

Though a nonsignificant MANOVA such as the one found in this study would normally finalize an analysis, three separate *t*-tests for independent samples were utilized to more extensively examine the data concerning causal beliefs and social distance. The goal of such analyses was to possibly obtain useful information for further consideration. These three *t*-tests analyzed the relationships between the cause of depression depicted and amount of social distance desired from the various groups (strangers, family, and friends) of individuals. Significant differences in social distance desired were not related to depicted cause (biological vs. non-biological) in the stranger ($t(219) = -1.88, p = .06$) or family member groups ($t(219) = -1.545, p = .12$). However, a significant difference related to cause was found in the “friend” condition ($t(219) = -2.461, p = .02$); respondents reported a desire for more social distance when the friend’s depression was described as having a non-biological cause ($M = 17.21, SD = 4.38$) versus a biological cause ($M = 15.78, SD = 4.28$).

Two *t*-tests (for correlated samples) were also conducted in order to determine whether respondents reported a greater desire for social distance overall from depressed strangers versus depressed friends. Although there was a third group (family members), this group contained one less question than the other two groups, which did not allow for the subscales to be compared directly. Regarding the first two groups, respondents reported a desire for significantly more social distance from depressed strangers ($M = 19.14, SD = 5.06$) than depressed friends ($M = 16.48, SD = 4.40$), $t(222) = 11.65, p < .01$.

Further exploratory analyses were then conducted as a way of better clarifying relationships among social distance desired from strangers versus friends versus family

members. First, the question (“If this person were a stranger/friend would you accept them as an in-law”) contained in the strangers and friends subscales but not contained in the family subscale was eliminated. This resulted in three scales with the same six items. Three *t*-tests for correlated samples were then conducted to compare the mean social distance desired as reported for each group. Statistically significant differences were found among the means of all three subscales. The mean amount of social distance desired from strangers ($M = 17.01, SD = 4.45$) was significantly greater than that desired from friends ($M = 14.49, SD = 3.86$), $t(221) = 12.19, p < .01$) and family members ($M = 13.24, SD = 4.06$), $t(221) = 14.37, p < .01$. The mean amount of social distance desired from family members was significantly less than that desired from friends ($t(221) = -6.87, p < .01$). In other words, respondents reported a desire for the most social distance from strangers, less from friends, and even less from family members. Finally, the mean *item* score for each of the three subscales, using the full (six or seven items) for each scale, was examined. The mean item score for strangers was greater than that desired from friends ($M = 2.74$ v. $M = 2.36$). The mean item score for family members was less than both that desired from strangers and from friends ($M = 2.21$). Although inferential tests were not used to compare the mean item scores, the results appear to suggest individuals desire a smaller amount of social distance when there is a more intimate relationship with the depressed individual.

To summarize, the results of the MANOVA described above did not support the first hypothesis of this study, that is, that a relationship exists between causal explanations for depression and the amount of social distance individuals would desire from those with depression. However, the exploratory *t*-tests conducted separately for

each of the three groups did suggest that the amount of social distance desired from depressed *friends* is greater when the cause of the depression is related to non-biological (i.e., psychosocial) versus a biological (i.e., an “imbalance of brain chemicals”) cause. The final analyses of this study, which involved a series of *t*-tests for correlated samples, supported the second hypothesis that social distance desired from a depressed person will vary significantly depending upon whether the depressed person is a stranger, friend, or family member. Respondents reported a desire for the most social distance from depressed strangers, less distance for friends, and the least amount of desired social distance from family members.

CHAPTER V

DISCUSSION

It has been demonstrated that stigma toward depressed individuals, a decreased amount of social support for depressed individuals, and an increased amount of social distance from depressed individuals are associated with poorer treatment outcomes (e.g., Halter, 2004; Vandervoort, 1999; Warren, 1997). Public awareness campaigns and organizations involving mental illness generally seek to improve outcomes for depression by educating laypersons regarding the disorder in such areas as treatment possibilities, causes of the illness, and frequency of the diagnosis. Typical goals of these campaigns and organizations include reducing stigma and increasing social support offered to individuals with depression. However, public awareness campaigns do not all emphasize the same causes of depression. Instead, the causes of depression can vary from primarily psychosocial factors, primarily biological factors, or a combination of the two factors. Furthermore, causal depictions imply associated treatment strategies; for example, the

message that depression is caused primarily by biological factors implies that pharmacological treatments are most appropriate.

In the United States, it is typical for such campaigns to present depression as primarily a biological phenomenon. Attribution theory, according to Wiener (1995), suggests that this type of strategy can reduce negative attitudes toward individuals with depression due to the illness being caused by biological factors that are out of a person's control. Outside of the United States, public awareness campaigns often describe depression as resulting from a combination of both biological and psychosocial factors. Research on the effectiveness of such campaigns suggests that they can and do influence lay beliefs concerning mental illness (Jorm, Christensen, & Griffiths, 2005a) and that they can also lead to less negative perceptions concerning those with mental disorders (Vaughan & Hansen, 2004). Research on the effectiveness of public awareness campaigns within the United States appears more limited.

The present study examined whether social distance from a depressed individual is associated to causal beliefs concerning depression. An experimental design in which causal depictions were varied was utilized. Findings from the current study suggest that social distance was relatively unaffected by causal beliefs/depictions. More specifically, individuals did not desire more or less social distance when the depression was presented as being caused by either biological or non-biological factors. The findings of the current study, along with the outcomes of previous studies demonstrating the effectiveness of public awareness campaigns outside of the United States, may be relevant to future public awareness campaigns within the United States concerning depression. It does not appear essential to emphasize depression as having a primarily biological cause in order to

reduce negative attitudes toward those with depression. It is possible that public awareness campaigns may be more effective by moving toward an approach where depression is described as having multiple potential causes, including both biogenetic and environmental factors. However, this hypothesis was not tested in the present study.

The current study did demonstrate, through exploratory analyses, that individuals desire a greater amount of social distance from depressed friends when the depression is not caused by biological factors. Although the difference in mean social distance according to causal depiction was statistically significant, the difference was relatively small. However, if this finding were to be replicated by others, an implication is that future public awareness messages could be tailored accordingly. Lastly, evidence from this study suggests people desire the most social distance from strangers as opposed to friends or family members. Such differences might also be considered in developing more refined public awareness campaigns concerning depression.

There are clearly limitations to the present study. Most importantly, a convenience sample of university students was utilized, and thus results from this study cannot be generalized with confidence to the adult population as a whole. Self-selection biases were also possible, as the respondents typically received some incentive (extra credit points in their classes) to participate in the study. Another limitation is that some respondents did not correctly identify the cause of the depression as presented in their vignettes; this finding suggests the possibility that the internal validity of this study may have been compromised to some degree. If such participants had been excluded from the subsequent analyses, results might have differed; however, such a strategy was not

included in the design of the study and was thus not enacted. Finally, the multiple exploratory *t*-tests utilized in the analyses increased the risk of Type I errors.

The existing literature discussed above as well as the results of the present study suggest further research concerning lay beliefs, social distance, and public awareness campaigns is warranted. Some of the topics which might be addressed include the following: How effective are current United States public awareness campaigns in reducing stigma toward, and social distance from, those with depression? Would modifying such campaigns to more equally emphasize both biogenetic and psychosocial causes of depression be of benefit? Would it be helpful to provide targeted campaigns related to whether the depressed person being considered is a family member versus a friend versus a stranger? Of note, it would be most helpful if nationally representative samples were utilized in studies investigating the above areas.

CHAPTER VI

CONCLUSION

As discussed above, social support toward, and desired social distance from, depressed persons has been seen in some studies to be related to causal beliefs about the depression. The present study examined relationships among social distance and causal beliefs in depression in order to clarify whether changes to existing public awareness campaigns concerning depression might be warranted. In the present study, causal beliefs did not appear to strongly influence the amount of social distance one might desire from depressed family members, friends, or strangers. It was found that laypersons reported a desire for more social distance overall from strangers, with less social distance desired from friends and family members. Further exploratory analyses did suggest causal beliefs may affect social distance desired from friends, with a greater amount of social distance desired when individuals believe the depression to be caused by non-biological factors. The findings discussed above suggest current or future public awareness campaigns concerning depression might benefit from considerations of both

the causal depictions utilized in the campaign as well as the relationships (e.g., family member vs. stranger) laypersons might have with different depressed persons. In turn, such considerations and modifications might lead to better outcomes for those struggling with depressive disorders.

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APPENDIX

APPENDIX A

Informed Consent

I am Samantha Tomsick, a student of the master in clinical psychology program at Cleveland State University. I am conducting research related to beliefs concerning depression. You must be at least 18 years old to participate in this study. In this study you will complete one survey which asks for your opinions on certain questions related to depression. The amount of time necessary to complete this survey should not exceed 45 minutes. Your responses will be completely anonymous. There are no significant risks involved with participating in this study. If any question or questions on the survey cause you to feel uncomfortable, you do not have to answer that question or questions.

Participation in this study is entirely voluntary, and you are free to withdraw from the study at any time without penalty. If you have any questions you may contact me at (440) 263-5105 or you may contact Dr. Chris France, my faculty advisor concerning this research, at (216) 687-9386. By signing below, you are providing your consent to participate in this study.

I understand that if I have any questions about my rights as a research subject I can contact the Cleveland State University Institutional Review Board at (216) 687-3630.

Signature _____

CSU ID Number _____

Date _____

APPENDIX B

Vignette # 1

Mary is an adult female. She is experiencing symptoms of depression. For example, Mary has experienced a very sad mood and feelings of emptiness nearly every day for the last several weeks. She has difficulty sleeping and often wakes in the middle of the night and is unable to fall back to sleep. Mary has noticed she does not have very much of an appetite and has not been eating as much as usual. Others have noticed that Mary has been lacking energy and has been unable to concentrate during important meetings at work. Mary has lost interest in the activities and hobbies she used to find pleasurable and rewarding. Mary has been feeling quite worthless and helpless, and she is not sure whether her life will ever get better. Mary made an appointment with a physician to discuss her symptoms. The physician diagnosed Mary as suffering from depression and prescribed an antidepressant medication. The physician explained to Mary that her depressive symptoms were likely due to an imbalance of certain brain chemicals, and that the medication would help correct this chemical imbalance.

Vignette # 2

Mary is an adult female. She is experiencing symptoms of depression. For example, Mary has experienced a very sad mood and feelings of emptiness nearly every day for the last several weeks. She has difficulty sleeping and often wakes in the middle of the night and is unable to fall back to sleep. Mary has noticed she does not have very much of an appetite and has not been eating as much as usual. Others have noticed that Mary has been lacking energy and has been unable to concentrate during important meetings at work. Mary has lost interest in the activities and hobbies she used to find pleasurable and rewarding. Mary has been feeling quite worthless and helpless, and she is not sure whether her life will ever get better. Mary made an appointment with a physician to discuss her symptoms. The physician diagnosed Mary as suffering from depression and asked her to undergo a complete physical and other appropriate medical tests. The tests did not reveal any specific chemical or biological cause for Mary's depression.

Vignette # 3

John is an adult male. He is experiencing symptoms of depression. For example, John has experienced a very sad mood and feelings of emptiness nearly every day for the last several weeks. He has difficulty sleeping and often wakes in the middle of the night and is unable to fall back to sleep. John has noticed he does not have very much of an appetite and has not been eating as much as usual. Others have noticed that John has been lacking energy and has been unable to concentrate during important meetings at work. John has lost interest in the activities and hobbies he used to find pleasurable and rewarding. John has been feeling quite worthless and helpless, and he is not sure whether his life will ever get better. John made an appointment with a physician to discuss his symptoms. The physician diagnosed John as suffering from depression and prescribed an antidepressant medication. The physician explained to John that his depressive symptoms were likely due to an imbalance of certain brain chemicals, and that the medication would help correct this chemical imbalance.

Vignette # 4

John is an adult male. He is experiencing symptoms of depression. For example, John has experienced a very sad mood and feelings of emptiness nearly every day for the last several weeks. He has difficulty sleeping and often wakes in the middle of the night and is unable to fall back to sleep. John has noticed he does not have very much of an appetite and has not been eating as much as usual. Others have noticed that John has been lacking energy and has been unable to concentrate during important meetings at work. John has lost interest in the activities and hobbies he used to find pleasurable and rewarding. John has been feeling quite worthless and helpless, and he is not sure whether his life will ever get better. John made an appointment with a physician to discuss his symptoms. The physician diagnosed John as suffering from depression and asked him to undergo a complete physical and other appropriate medical tests. The tests did not reveal any specific chemical or biological cause for John's depression.

APPENDIX C

Opinion Survey One

Please answer the following questions on Side One of your Scantron sheet. Please use a #2 pencil. Do not put your name anywhere on the Scantron.

A. Please provide your gender by filling in the appropriate "bubble" (female or male) next to "**SEX.**"

B. Please provide the year and month of birth under the area labeled "**BIRTH DATE.**" First, fill in the two bubbles under "**Yr.**" (left side) that correspond to the year of your birth (e.g., if you were born in 1986, you would fill in the bubbles for "8" and "6"). Next, fill in the two bubbles under "**Mo.**" that correspond to the month of your birth (e.g., if you were born in August you would fill in "0" and "8").

C. In the far left column of the "**SPECIAL CODES**" section of your Scantron, please indicate your ethnicity/cultural background. Use the code below to determine which number to write in the far left-hand space under **SPECIAL CODES**. You will use only one digit from 1 to 8. For example, if you are of African American ethnicity, you would write "1" in the far left-hand space, then fill in the "1" bubble underneath.

1. African American
2. White
3. Hispanic/Latino
4. Asian
5. Indian or Middle Eastern
6. Native American/Alaskan Native
7. Biracial/multiracial
8. Other

D. Next to the **SPECIAL CODES** section of your Scantron is a section labeled "**IDENTIFICATION NUMBER.**" Starting at the left, please write in the 3-digit number appearing at the upper right-hand corner of this survey. Then, fill in the Scantron bubbles below the number. For example, if your survey is labeled "243," you would write "243" in the **IDENTIFICATION NUMBER** blanks and fill in the matching bubbles below the number.

E. In the space following the 3-digit number described just above, please write the one-digit number appearing at the upper right-hand corner of the vignette provided to you. Then fill in the Scantron bubble below the number. For example, if your vignette is labeled "2" in the upper right-hand corner, you would write the number "2" in the fourth space of the **IDENTIFICATION NUMBER** blanks. Using the example provided in D (above), the blanks in the **IDENTIFICATION NUMBER** section would now read "2432" and the matching bubbles would be filled in below.

F. Now, please read the vignette provided to you. After reading the vignette, please answer the questions below. Record your answers on your Scantron sheet. Please record only one answer for each question. If you do not feel comfortable answering a particular question or questions, feel free to leave the answer blank for that question or questions.

1. In the vignette provided to you,
- A. the person's depressive symptoms were described as resulting from a biological cause (i.e., an imbalance of brain chemicals).
 - B. medical tests did not reveal any chemical or biological causes for the person's depressive symptoms.
 - C. the person's depressive symptoms were described as resulting from a combination of biological and psychosocial factors.
 - D. None of the above

Concerning the person in the vignette:

2. Would you rent out a room to somebody with these problems?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

3. Would you accept a person like this as your coworker?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

4. Would you accept a person like this as your neighbor?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

5. Would you hire this person for taking care of your kids for a few hours?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

6. Would you accept a person like this as an in-law?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

7. Would you introduce someone like this to your friends?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

8. If a friend of yours was looking for an employee, would you recommend a person like this?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

Again, please refer to your vignette when answering the following questions.

9. If this person were a **friend** would you rent out a room to this person?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

10. If this person were a **friend** would you accept them as a coworker?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

11. If this person were a **friend** would you accept them as a neighbor?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

12. If this person were a **friend** would you hire them for taking care of your kids for a few hours?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

13. If this person were a **friend** would you accept them as an in-law?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

14. If this person were a **friend** would you introduce them to your other friends?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

15. If this person were a **friend** and another friend of yours was looking for an employee, would you recommend this person?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

Again, please refer to your vignette when answering the following questions.

16. If this person were a **family member** would you rent out a room to this person?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

17. If this person were a **family member** would you accept them as a coworker?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

18. If this person were a **family member** would you accept them as a neighbor?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

19. If this person were a **family member** would you hire them for taking care of your kids for a few hours?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

20. If this person were a **family member** would you introduce them to your friends?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

21. If this person were a **family member** and a friend of yours was looking for an employee, would you recommend this person?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

G. Please answer the following questions. Continue to use your Scantron sheet to record your answers. If you do not feel comfortable answering one or more of the questions below, feel free to skip that question or questions.

22. Which of the following best describes your personal experience with depression?

- A. I have never experienced symptoms of depression.
- B. I have experienced symptoms of depression, but such symptoms have never been more than a minor annoyance.
- C. I have experienced symptoms of depression severe enough to interfere with daily functioning, but never to an overwhelming degree.
- D. On one or more occasions, I have experienced symptoms of depression severe enough to significantly interfere with my daily life and functioning.

23. Have you ever been formally diagnosed (i.e., by a doctor or mental health professional) with depression?

- A. Yes
- B. No

24. Have you ever been treated by a doctor or other medical or mental health professional for depression (e.g., with medication or counseling, etc.)?

- A. Yes
- B. No

25. Has a family member, relative, or close friend of yours ever been diagnosed with and/or treated for depression?

- A. Yes
- B. No
- C. Unsure

H. Now, please answer the following open-ended questions. Write directly on this sheet and give as much or as little detail as you wish. Please write legibly so that we are able to understand your opinions.

1. In your opinion, what causes depression?

2. In your opinion, what should a depressed person do in order to reduce or eliminate his or her depression?

3. If a family member or friend told you that they were depressed, what would you advise them to do?

4. On line "A" below, please write in your college major (e.g., "Education"). If you do not have a major, check either "Undeclared" or "Not Applicable" as appropriate.

A. My major is _____.

B. _____ Undeclared. I have not yet declared a major, but will do so in the future.

C. _____ Not Applicable. I do not have a current major, and I will not need to declare one in the future (e.g., this may be true if you are auditing classes, have already graduated, etc.).

I. Please answer the following questions directly on this page by circling your answer to each question.

1. What is your current academic standing?

- A. freshman
- B. sophomore
- C. junior
- D. senior
- E. post-baccalaureate (but not in a formal graduate program)
- F. graduate student (in a formal graduate program)

2. What is your annual household income (i.e., the combined total income, before any taxes, of all members of the household over the past year)?

- A. Less than \$24,999
- B. \$25,000-\$74,999
- C. \$75,000 and above

Thank you very much for participating in this study!

Opinion Survey Two

Please answer the following questions on Side One of your Scantron sheet. Please use a #2 pencil. Do not put your name anywhere on the Scantron.

A. Please provide your gender by filling in the appropriate "bubble" (female or male) next to **"SEX."**

B. Please provide the year and month of birth under the area labeled **"BIRTH DATE."** First, fill in the two bubbles under **"Yr."** (left side) that correspond to the year of your birth (e.g., if you were born in 1986, you would fill in the bubbles for "8" and "6"). Next, fill in the two bubbles under **"Mo."** that correspond to the month of your birth (e.g., if you were born in August you would fill in "0" and "8").

C. In the far left column of the **"SPECIAL CODES"** section of your Scantron, please indicate your ethnicity/cultural background. Use the code below to determine which number to write in the far left-hand space under **SPECIAL CODES**. You will use only one digit from 1 to 8. For example, if you are of African American ethnicity, you would write in "1" in the far left-hand space, then fill in the "1" bubble underneath.

1. African American
2. White
3. Hispanic/Latino
4. Asian
5. Indian or Middle Eastern
6. Native American/Alaskan Native
7. Biracial/multiracial
8. Other

D. Next to the **SPECIAL CODES** section of your Scantron is a section labeled **"IDENTIFICATION NUMBER."** Starting at the left, please write the 3-digit number appearing at the upper right-hand corner of this survey. Then, fill in the Scantron bubbles below the number. For example, if your survey is labeled "243," you would write "243" in the **IDENTIFICATION NUMBER** blanks and fill in the matching bubbles below the number.

E. In the space following the 3-digit number described just above, please write the one-digit number appearing at the upper right-hand corner of the vignette provided to you. Then fill in the Scantron bubble below the number. For example, if your vignette is labeled "2" in the upper right-hand corner, you would write the number "2" in the fourth space of the **IDENTIFICATION NUMBER** blanks. Using the example provided in D (above), the blanks in the **IDENTIFICATION NUMBER** section would now read "2432" and the matching bubbles would be filled in below.

F. Now, please read the vignette provided to you. After reading the vignette, please answer the questions below. Record your answers on your Scantron sheet. Please record only one answer for each question. If you do not feel comfortable answering a particular question or questions, feel free to leave the answer blank for that question or questions.

1. In the vignette provided to you,
 - A. the person's depressive symptoms were described as resulting from a biological cause (i.e., an imbalance of brain chemicals).
 - B. medical tests did not reveal any chemical or biological causes for the person's depressive symptoms.
 - C. the person's depressive symptoms were described as resulting from a combination of biological and psychosocial factors.
 - D. None of the above

Concerning the person in the vignette:

2. Would you rent out a room to somebody with these problems?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

3. Would you accept a person like this as your coworker?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

4. Would you accept a person like this as your neighbor?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

5. Would you hire this person for taking care of your kids for a few hours?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

6. Would you accept a person like this as an in-law?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

7. Would you introduce someone like this to your friends?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

8. If a friend of yours was looking for an employee, would you recommend a person like this?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

Again, please refer to your vignette when answering the following questions.

9. If this person were a **family member** would you rent out a room to this person?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

10. If this person were a **family member** would you accept them as a coworker?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

11. If this person were a **family member** would you accept them as a neighbor?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

12. If this person were a **family member** would you hire them for taking care of your kids for a few hours?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

13. If this person were a **family member** would you introduce them to your friends?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

14. If this person were a **family member** and a friend of yours was looking for an employee, would you recommend this person?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

Again, please refer to your vignette when answering the following questions.

15. If this person were a **friend** would you rent out a room to this person?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

16. If this person were a **friend** would you accept them as a coworker?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

17. If this person were a **friend** would you accept them as a neighbor?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

18. If this person were a **friend** would you hire them for taking care of your kids for a few hours?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

19. If this person were a **friend** would you accept them as an in-law?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

20. If this person were a **friend** would you introduce them to your other friends?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

21. If this person were a **friend** and another friend of yours was looking for an employee, would you recommend this person?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

G. Please answer the following questions. Continue to use your Scantron sheet to record your answers. If you do not feel comfortable answering one or more of the questions below, feel free to skip that question or questions.

22. Which of the following best describes your personal experience with depression?

- E. I have never experienced symptoms of depression.
- F. I have experienced symptoms of depression, but such symptoms have never been more than a minor annoyance.
- G. I have experienced symptoms of depression severe enough to interfere with daily functioning, but never to an overwhelming degree.
- H. On one or more occasions, I have experienced symptoms of depression severe enough to significantly interfere with my daily life and functioning.

23. Have you ever been formally diagnosed (i.e., by a doctor or mental health professional) with depression?

- A. Yes
- B. No

24. Have you ever been treated by a doctor or other medical or mental health professional for depression (e.g., with medication or counseling, etc.)?

- A. Yes
- B. No

25. Has a family member, relative, or close friend of yours ever been diagnosed with and/or treated for depression?

- A. Yes
- B. No
- C. Unsure

H. Now, please answer the following open-ended questions. Write directly on this sheet and give as much or as little detail as you wish. Please write legibly so that we are able to understand your opinions.

1. In your opinion, what causes depression?

2. In your opinion, what should a depressed person do in order to reduce or eliminate his or her depression?

3. If a family member or friend told you that they were depressed, what would you advise them to do?

4. On line "A" below, please write in your college major (e.g., "Education"). If you do not have a major, check either "Undeclared" or "Not Applicable" as appropriate.

- A. My major is _____.
- B. _____ Undeclared. I have not yet declared a major, but will do so in the future.
- C. _____ Not Applicable. I do not have a current major, and I will not need to declare one in the future (e.g., this may be true if you are auditing classes, have already graduated, etc.).

I. Please answer the following questions directly on this page by circling your answer to each question.

1. What is your current academic standing?

- A. freshman
- B. sophomore
- C. junior
- D. senior
- E. post-baccalaureate (but not in a formal graduate program)
- F. graduate student (in a formal graduate program)

2. What is your annual household income (i.e., the combined total income, before any taxes, of all members of the household over the past year)?

- A. Less than \$24,999
- B. \$25,000-\$74,999
- C. \$75,000 and above

Thank you very much for participating in this study!

Opinion Survey Three

Please answer the following questions on Side One of your Scantron sheet. Please use a #2 pencil. Do not put your name anywhere on the Scantron.

A. Please provide your gender by filling in the appropriate "bubble" (female or male) next to **"SEX."**

B. Please provide the year and month of birth under the area labeled **"BIRTH DATE."** First, fill in the two bubbles under **"Yr."** (left side) that correspond to the year of your birth (e.g., if you were born in 1986, you would fill in the bubbles for "8" and "6"). Next, fill in the two bubbles under **"Mo."** that correspond to the month of your birth (e.g., if you were born in August you would fill in "0" and "8").

C. In the far left column of the **"SPECIAL CODES"** section of your Scantron, please indicate your ethnicity/cultural background. Use the code below to determine which number to write in the far left-hand space under **SPECIAL CODES**. You will use only one digit from 1 to 8. For example, if you are of African American ethnicity, you would write "1" in the far left-hand space, then fill in the "1" bubble underneath.

1. African American
2. White
3. Hispanic/Latino
4. Asian
5. Indian or Middle Eastern
6. Native American/Alaskan Native
7. Biracial/multiracial
8. Other

D. Next to the **SPECIAL CODES** section of your Scantron is a section labeled **"IDENTIFICATION NUMBER."** Starting at the left, please write in the 3-digit number appearing at the upper right-hand corner of this survey. Then, fill in the Scantron bubbles below the number. For example, if your survey is labeled "243," you would write "243" in the **IDENTIFICATION NUMBER** blanks and fill in the matching bubbles below the number.

E. In the space following the 3-digit number described just above, please write the one-digit number appearing at the upper right-hand corner of the vignette provided to you. Then fill in the Scantron bubble below the number. For example, if your vignette is labeled "2" in the upper right-hand corner, you would write the number "2" in the fourth space of the **IDENTIFICATION NUMBER** blanks. Using the example provided in D (above), the blanks in the **IDENTIFICATION NUMBER** section would now read "2432" and the matching bubbles would be filled in below.

F. Now, please read the vignette provided to you. After reading the vignette, please answer the questions below. Record your answers on your Scantron sheet. Please record only one answer for each question. If you do not feel comfortable answering a particular question or questions, feel free to leave the answer blank for that question or questions.

1. In the vignette provided to you,
 - A. the person's depressive symptoms were described as resulting from a biological cause (i.e., an imbalance of brain chemicals).
 - B. medical tests did not reveal any chemical or biological causes for the person's depressive symptoms.
 - C. the person's depressive symptoms were described as resulting from a combination of biological and psychosocial factors.
 - D. None of the above

Concerning the person in the vignette:

2. If this person were a **friend** would you rent out a room to this person?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

3. If this person were a **friend** would you accept them as a coworker?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

4. If this person were a **friend** would you accept them as a neighbor?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

5. If this person were a **friend** would you hire them for taking care of your kids for a few hours?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

6. If this person were a **friend** would you accept them as an in-law?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

7. If this person were a **friend** would you introduce them to your other friends?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

8. If this person were a **friend** and another friend of yours was looking for an employee, would you recommend this person?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

Again, please refer to your vignette when answering the following questions.

9. Would you rent out a room to somebody with these problems?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

10. Would you accept a person like this as your coworker?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

11. Would you accept a person like this as your neighbor?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

12. Would you hire this person for taking care of your kids for a few hours?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

13. Would you accept a person like this as an in-law?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

14. Would you introduce someone like this to your friends?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

15. If a friend of yours was looking for an employee, would you recommend a person like this?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

Again, please refer to your vignette when answering the following questions.

16. If this person were a **family member** would you rent out a room to this person?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

17. If this person were a **family member** would you accept them as a coworker?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

18. If this person were a **family member** would you accept them as a neighbor?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

19. If this person were a **family member** would you hire them for taking care of your kids for a few hours?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

20. If this person were a **family member** would you introduce them to your friends?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

21. If this person were a **family member** and a friend of yours was looking for an employee, would you recommend this person?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

G. Please answer the following questions. Continue to use your Scantron sheet to record your answers. If you do not feel comfortable answering one or more of the questions below, feel free to skip that question or questions.

22. Which of the following best describes your personal experience with depression?

- I. I have never experienced symptoms of depression.
- J. I have experienced symptoms of depression, but such symptoms have never been more than a minor annoyance.
- K. I have experienced symptoms of depression severe enough to interfere with daily functioning, but never to an overwhelming degree.
- L. On one or more occasions, I have experienced symptoms of depression severe enough to significantly interfere with my daily life and functioning.

23. Have you ever been formally diagnosed (i.e., by a doctor or mental health professional) with depression?

- A. Yes
- B. No

24. Have you ever been treated by a doctor or other medical or mental health professional for depression (e.g., with medication or counseling, etc.)?

- A. Yes
- B. No

25. Has a family member, relative, or close friend of yours ever been diagnosed with and/or treated for depression?

- A. Yes
- B. No
- C. Unsure

H. Now, please answer the following open-ended questions. Write directly on this sheet and give as much or as little detail as you wish. Please write legibly so that we are able to understand your opinions.

1. In your opinion, what causes depression?

2. In your opinion, what should a depressed person do in order to reduce or eliminate his or her depression?

3. If a family member or friend told you that they were depressed, what would you advise them to do?

4. On line "A" below, please write in your college major (e.g., "Education"). If you do not have a major, check either "Undeclared" or "Not Applicable" as appropriate.

- A. My major is _____.
- B. _____ Undeclared. I have not yet declared a major, but will do so in the future.
- C. _____ Not Applicable. I do not have a current major, and I will not need to declare one in the future (e.g., this may be true if you are auditing classes, have already graduated, etc.).

I. Please answer the following questions directly on this page by circling your answer to each question.

1. What is your current academic standing?

- A. freshman
- B. sophomore
- C. junior
- D. senior
- E. post-baccalaureate (but not in a formal graduate program)
- F. graduate student (in a formal graduate program)

2. What is your annual household income (i.e., the combined total income, before any taxes, of all members of the household over the past year)?

- A. Less than \$24,999
- B. \$25,000-\$74,999
- C. \$75,000 and above

Thank you very much for participating in this study!

Opinion Survey Four

Please answer the following questions on Side One of your Scantron sheet. Please use a #2 pencil. Do not put your name anywhere on the Scantron.

A. Please provide your gender by filling in the appropriate "bubble" (female or male) next to **"SEX."**

B. Please provide the year and month of birth under the area labeled **"BIRTH DATE."** First, fill in the two bubbles under **"Yr."** (left side) that correspond to the year of your birth (e.g., if you were born in 1986, you would fill in the bubbles for "8" and "6"). Next, fill in the two bubbles under **"Mo."** that correspond to the month of your birth (e.g., if you were born in August you would fill in "0" and "8").

C. In the far left column of the **"SPECIAL CODES"** section of your Scantron, please indicate your ethnicity/cultural background. Use the code below to determine which number to write in the far left-hand space under **SPECIAL CODES**. You will use only one digit from 1 to 8. For example, if you are of African American ethnicity, you would write "1" in the far left-hand space, then fill in the "1" bubble underneath.

1. African American
2. White
3. Hispanic/Latino
4. Asian
5. Indian or Middle Eastern
6. Native American/Alaskan Native
7. Biracial/multiracial
8. Other

D. Next to the **SPECIAL CODES** section of your Scantron is a section labeled **"IDENTIFICATION NUMBER."** Starting at the left, please write in the 3-digit number appearing at the upper right-hand corner of this survey. Then, fill in the Scantron bubbles below the number. For example, if your survey is labeled "243," you would write "243" in the **IDENTIFICATION NUMBER** blanks and fill in the matching bubbles below the number.

E. In the space following the 3-digit number described just above, please write the one-digit number appearing at the upper right-hand corner of the vignette provided to you. Then fill in the Scantron bubble below the number. For example, if your vignette is labeled "2" in the upper right-hand corner, you would write the number "2" in the fourth space of the **IDENTIFICATION NUMBER** blanks. Using the example provided in D (above), the blanks in the **IDENTIFICATION NUMBER** section would now read "2432" and the matching bubbles would be filled in below.

F. Now, please read the vignette provided to you. After reading the vignette, please answer the questions below. Record your answers on your Scantron sheet. Please record only one answer for each question. If you do not feel comfortable answering a particular question or questions, feel free to leave the answer blank for that question or questions.

1. In the vignette provided to you,
- A. the person's depressive symptoms were described as resulting from a biological cause (i.e., an imbalance of brain chemicals).
 - B. medical tests did not reveal any chemical or biological causes for the person's depressive symptoms.
 - C. the person's depressive symptoms were described as resulting from a combination of biological and psychosocial factors.
 - D. None of the above

Concerning the person in the vignette:

2. If this person were a **friend** would you rent out a room to this person?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

3. If this person were a **friend** would you accept them as a coworker?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

4. If this person were a **friend** would you accept them as a neighbor?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

5. If this person were a **friend** would you hire them for taking care of your kids for a few hours?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

6. If this person were a **friend** would you accept them as an in-law?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

7. If this person were a **friend** would you introduce them to your other friends?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

8. If this person were a **friend** and another friend of yours was looking for an employee, would you recommend this person?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

Again, please refer to your vignette when answering the following questions.

9. If this person were a **family member** would you rent out a room to this person?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

10. If this person were a **family member** would you accept them as a coworker?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

11. If this person were a **family member** would you accept them as a neighbor?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

12. If this person were a **family member** would you hire them for taking care of your kids for a few hours?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

13. If this person were a **family member** would you introduce them to your friends?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

14. If this person were a **family member** and a friend of yours was looking for an employee, would you recommend this person?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

Again, please refer to your vignette when answering the following questions.

15. Would you rent out a room to somebody with these problems?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

16. Would you accept a person like this as your coworker?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

17. Would you accept a person like this as your neighbor?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

18. Would you hire this person for taking care of your kids for a few hours?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

19. Would you accept a person like this as an in-law?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

20. Would you introduce someone like this to your friends?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

21. If a friend of yours was looking for an employee, would you recommend a person like this?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

G. Please answer the following questions. Continue to use your Scantron sheet to record your answers. If you do not feel comfortable answering one or more of the questions below, feel free to skip that question or questions.

22. Which of the following best describes your personal experience with depression?

- M. I have never experienced symptoms of depression.
- N. I have experienced symptoms of depression, but such symptoms have never been more than a minor annoyance.
- O. I have experienced symptoms of depression severe enough to interfere with daily functioning, but never to an overwhelming degree.
- P. On one or more occasions, I have experienced symptoms of depression severe enough to significantly interfere with my daily life and functioning.

23. Have you ever been formally diagnosed (i.e., by a doctor or mental health professional) with depression?

- A. Yes
- B. No

24. Have you ever been treated by a doctor or other medical or mental health professional for depression (e.g., with medication or counseling, etc.)?

- A. Yes
- B. No

25. Has a family member, relative, or close friend of yours ever been diagnosed with and/or treated for depression?

- A. Yes
- B. No
- C. Unsure

H. Now, please answer the following open-ended questions. Write directly on this sheet and give as much or as little detail as you wish. Please write legibly so that we are able to understand your opinions.

1. In your opinion, what causes depression?

2. In your opinion, what should a depressed person do in order to reduce or eliminate his or her depression?

3. If a family member or friend told you that they were depressed, what would you advise them to do?

4. On line "A" below, please write in your college major (e.g., "Education"). If you do not have a major, check either "Undeclared" or "Not Applicable" as appropriate.

- A. My major is _____.
- B. _____ Undeclared. I have not yet declared a major, but will do so in the future.
- C. _____ Not Applicable. I do not have a current major, and I will not need to declare one in the future (e.g., this may be true if you are auditing classes, have already graduated, etc.).

I. Please answer the following questions directly on this page by circling your answer to each question.

1. What is your current academic standing?

- A. freshman
- B. sophomore
- C. junior
- D. senior
- E. post-baccalaureate (but not in a formal graduate program)
- F. graduate student (in a formal graduate program)

2. What is your annual household income (i.e., the combined total income, before any taxes, of all members of the household over the past year)?

- A. Less than \$24,999
- B. \$25,000-\$74,999
- C. \$75,000 and above

Thank you very much for participating in this study!

Opinion Survey Five

Please answer the following questions on Side One of your Scantron sheet. Please use a #2 pencil. Do not put your name anywhere on the Scantron.

A. Please provide your gender by filling in the appropriate "bubble" (female or male) next to **"SEX."**

B. Please provide the year and month of birth under the area labeled **"BIRTH DATE."** First, fill in the two bubbles under **"Yr."** (left side) that correspond to the year of your birth (e.g., if you were born in 1986, you would fill in the bubbles for "8" and "6"). Next, fill in the two bubbles under **"Mo."** that correspond to the month of your birth (e.g., if you were born in August you would fill in "0" and "8").

C. In the far left column of the **"SPECIAL CODES"** section of your Scantron, please indicate your ethnicity/cultural background. Use the code below to determine which number to write in the far left-hand space under **SPECIAL CODES**. You will use only one digit from 1 to 8. For example, if you are of African American ethnicity, you would write "1" in the far left-hand space, then fill in the "1" bubble underneath.

1. African American
2. White
3. Hispanic/Latino
4. Asian
5. Indian or Middle Eastern
6. Native American/Alaskan Native
7. Biracial/multiracial
8. Other

D. Next to the **SPECIAL CODES** section of your Scantron is a section labeled **"IDENTIFICATION NUMBER."** Starting at the left, please write in the 3-digit number appearing at the upper right-hand corner of this survey. Then, fill in the Scantron bubbles below the number. For example, if your survey is labeled "243," you would write "243" in the **IDENTIFICATION NUMBER** blanks and fill in the matching bubbles below the number.

E. In the space following the 3-digit number described just above, please write the one-digit number appearing at the upper right-hand corner of the vignette provided to you. Then fill in the Scantron bubble below the number. For example, if your vignette is labeled "2" in the upper right-hand corner, you would write the number "2" in the fourth space of the **IDENTIFICATION NUMBER** blanks. Using the example provided in D (above), the blanks in the **IDENTIFICATION NUMBER** section would now read "2432" and the matching bubbles would be filled in below.

F. Now, please read the vignette provided to you. After reading the vignette, please answer the questions below. Record your answers on your Scantron sheet. Please record only one answer for each question. If you do not feel comfortable answering a particular question or questions, feel free to leave the answer blank for that question or questions.

1. In the vignette provided to you,
 - A. the person's depressive symptoms were described as resulting from a biological cause (i.e., an imbalance of brain chemicals).
 - B. medical tests did not reveal any chemical or biological causes for the person's depressive symptoms.
 - C. the person's depressive symptoms were described as resulting from a combination of biological and psychosocial factors.
 - D. None of the above

Concerning the person in the vignette:

2. If this person were a **family member** would you rent out a room to this person?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

3. If this person were a **family member** would you accept them as a coworker?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

4. If this person were a **family member** would you accept them as a neighbor?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

5. If this person were a **family member** would you hire them for taking care of your kids for a few hours?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

6. If this person were a **family member** would you introduce them to your friends?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

7. If this person were a **family member** and a friend of yours was looking for an employee, would you recommend this person?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

Again, please refer to your vignette when answering the following questions.

8. Would you rent out a room to somebody with these problems?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

9. Would you accept a person like this as your coworker?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

10. Would you accept a person like this as your neighbor?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

11. Would you hire this person for taking care of your kids for a few hours?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

12. Would you accept a person like this as an in-law?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

13. Would you introduce someone like this to your friends?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

14. If a friend of yours was looking for an employee, would you recommend a person like this?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

Again, please refer to your vignette when answering the following questions.

15. If this person were a **friend** would you rent out a room to this person?

A	B	C	D	E
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16. If this person were a **friend** would you accept them as a coworker?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

17. If this person were a **friend** would you accept them as a neighbor?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

18. If this person were a **friend** would you hire them for taking care of your kids for a few hours?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

19. If this person were a **friend** would you accept them as an in-law?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

20. If this person were a **friend** would you introduce them to your other friends?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

21. If this person were a **friend** and another friend of yours was looking for an employee, would you recommend this person?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

G. Please answer the following questions. Continue to use your Scantron sheet to record your answers. If you do not feel comfortable answering one or more of the questions below, feel free to skip that question or questions.

22. Which of the following best describes your personal experience with depression?

- Q. I have never experienced symptoms of depression.
- R. I have experienced symptoms of depression, but such symptoms have never been more than a minor annoyance.
- S. I have experienced symptoms of depression severe enough to interfere with daily functioning, but never to an overwhelming degree.
- T. On one or more occasions, I have experienced symptoms of depression severe enough to significantly interfere with my daily life and functioning.

23. Have you ever been formally diagnosed (i.e., by a doctor or mental health professional) with depression?

- A. Yes
- B. No

24. Have you ever been treated by a doctor or other medical or mental health professional for depression (e.g., with medication or counseling, etc.)?

- A. Yes
- B. No

25. Has a family member, relative, or close friend of yours ever been diagnosed with and/or treated for depression?

- A. Yes
- B. No
- C. Unsure

H. Now, please answer the following open-ended questions. Write directly on this sheet and give as much or as little detail as you wish. Please write legibly so that we are able to understand your opinions.

1. In your opinion, what causes depression?

2. In your opinion, what should a depressed person do in order to reduce or eliminate his or her depression?

3. If a family member or friend told you that they were depressed, what would you advise them to do?

4. On line "A" below, please write in your college major (e.g., "Education"). If you do not have a major, check either "Undeclared" or "Not Applicable" as appropriate.

- A. My major is _____.
- B. _____ Undeclared. I have not yet declared a major, but will do so in the future.
- C. _____ Not Applicable. I do not have a current major, and I will not need to declare one in the future (e.g., this may be true if you are auditing classes, have already graduated, etc.).

I. Please answer the following questions directly on this page by circling your answer to each question.

1. What is your current academic standing?

- A. freshman
- B. sophomore
- C. junior
- D. senior
- E. post-baccalaureate (but not in a formal graduate program)
- F. graduate student (in a formal graduate program)

2. What is your annual household income (i.e., the combined total income, before any taxes, of all members of the household over the past year)?

- A. Less than \$24,999
- B. \$25,000-\$74,999
- C. \$75,000 and above

Thank you very much for participating in this study!

Opinion Survey Six

Please answer the following questions on Side One of your Scantron sheet. Please use a #2 pencil. Do not put your name anywhere on the Scantron.

A. Please provide your gender by filling in the appropriate "bubble" (female or male) next to **"SEX."**

B. Please provide the year and month of birth under the area labeled **"BIRTH DATE."** First, fill in the two bubbles under **"Yr."** (left side) that correspond to the year of your birth (e.g., if you were born in 1986, you would fill in the bubbles for "8" and "6"). Next, fill in the two bubbles under **"Mo."** that correspond to the month of your birth (e.g., if you were born in August you would fill in "0" and "8").

C. In the far left column of the **"SPECIAL CODES"** section of your Scantron, please indicate your ethnicity/cultural background. Use the code below to determine which number to write in the far left-hand space under **SPECIAL CODES**. You will use only one digit from 1 to 8. For example, if you are of African American ethnicity, you would write "1" in the far left-hand space, then fill in the "1" bubble underneath.

1. African American
2. White
3. Hispanic/Latino
4. Asian
5. Indian or Middle Eastern
6. Native American/Alaskan Native
7. Biracial/multiracial
8. Other

D. Next to the **SPECIAL CODES** section of your Scantron is a section labeled **"IDENTIFICATION NUMBER."** Starting at the left, please write the 3-digit number appearing at the upper right-hand corner of this survey. Then, fill in the Scantron bubbles below the number. For example, if your survey is labeled "243," you would write "243" in the **IDENTIFICATION NUMBER** blanks and fill in the matching bubbles below the number.

E. In the space following the 3-digit number described just above, please write in the one-digit number appearing at the upper right-hand corner of the vignette provided to you. Then fill in the Scantron bubble below the number. For example, if your vignette is labeled "2" in the upper right-hand corner, you would write the number "2" in the fourth space of the **IDENTIFICATION NUMBER** blanks. Using the example provided in D (above), the blanks in the **IDENTIFICATION NUMBER** section would now read "2432" and the matching bubbles would be filled in below.

F. Now, please read the vignette provided to you. After reading the vignette, please answer the questions below. Record your answers on your Scantron sheet. Please record only one answer for each question. If you do not feel comfortable answering a particular question or questions, feel free to leave the answer blank for that question or questions.

1. In the vignette provided to you,
- A. the person's depressive symptoms were described as resulting from a biological cause (i.e., an imbalance of brain chemicals).
 - B. medical tests did not reveal any chemical or biological causes for the person's depressive symptoms.
 - C. the person's depressive symptoms were described as resulting from a combination of biological and psychosocial factors.
 - D. None of the above

Concerning the person in the vignette:

2. If this person were a **family member** would you rent out a room to this person?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

3. If this person were a **family member** would you accept them as a coworker?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

4. If this person were a **family member** would you accept them as a neighbor?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

5. If this person were a **family member** would you hire them for taking care of your kids for a few hours?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

6. If this person were a **family member** would you introduce them to your friends?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

7. If this person were a **family member** and a friend of yours was looking for an employee, would you recommend this person?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

Again, please refer to your vignette when answering the following questions.

8. If this person were a **friend** would you rent out a room to this person?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

9. If this person were a **friend** would you accept them as a coworker?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

10. If this person were a **friend** would you accept them as a neighbor?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

11. If this person were a **friend** would you hire them for taking care of your kids for a few hours?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

12. If this person were a **friend** would you accept them as an in-law?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

13. If this person were a **friend** would you introduce them to your other friends?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

14. If this person were a **friend** and another friend of yours was looking for an employee, would you recommend this person?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

Again, please refer to your vignette when answering the following questions.

15. Would you rent out a room to somebody with these problems?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

16. Would you accept a person like this as your coworker?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

17. Would you accept a person like this as your neighbor?

A	B	C	D	E
Definitely Yes	Probably Yes	Unsure	Probably Not	Definitely Not

18. Would you hire this person for taking care of your kids for a few hours?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

19. Would you accept a person like this as an in-law?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

20. Would you introduce someone like this to your friends?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

21. If a friend of yours was looking for an employee, would you recommend a person like this?

- | | | | | |
|----------------|--------------|--------|--------------|----------------|
| A | B | C | D | E |
| Definitely Yes | Probably Yes | Unsure | Probably Not | Definitely Not |

G. Please answer the following questions. Continue to use your Scantron sheet to record your answers. If you do not feel comfortable answering one or more of the questions below, feel free to skip that question or questions.

22. Which of the following best describes your personal experience with depression?

- U. I have never experienced symptoms of depression.
- V. I have experienced symptoms of depression, but such symptoms have never been more than a minor annoyance.
- W. I have experienced symptoms of depression severe enough to interfere with daily functioning, but never to an overwhelming degree.
- X. On one or more occasions, I have experienced symptoms of depression severe enough to significantly interfere with my daily life and functioning.

23. Have you ever been formally diagnosed (i.e., by a doctor or mental health professional) with depression?

- A. Yes
- B. No

24. Have you ever been treated by a doctor or other medical or mental health professional for depression (e.g., with medication or counseling, etc.)?

- A. Yes
- B. No

25. Has a family member, relative, or close friend of yours ever been diagnosed with and/or treated for depression?

- A. Yes
- B. No
- C. Unsure

H. Now, please answer the following open-ended questions. Write directly on this sheet and give as much or as little detail as you wish. Please write legibly so that we are able to understand your opinions.

1. In your opinion, what causes depression?

2. In your opinion, what should a depressed person do in order to reduce or eliminate his or her depression?

3. If a family member or friend told you that they were depressed, what would you advise them to do?

4. On line "A" below, please write in your college major (e.g., "Education"). If you do not have a major, check either "Undeclared" or "Not Applicable" as appropriate.

- A. My major is _____.
- B. _____ Undeclared. I have not yet declared a major, but will do so in the future.
- C. _____ Not Applicable. I do not have a current major, and I will not need to declare one in the future (e.g., this may be true if you are auditing classes, have already graduated, etc.).

I. Please answer the following questions directly on this page by circling your answer to each question.

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Thank you very much for participating in this study!

APPENDIX D

Original Questions from the Modified Form of the Bogardus Social Distance Scale
(1987)

1. Would you rent out a room to somebody with these problems?
2. Would you accept a person like this as your coworker?
3. Would you accept a person like this as your neighbor?
4. Would you hire this person for taking care of your kids for a few hours?
5. Would you accept a person like this as an in-law?
6. Would you introduce someone like this to your friends?
7. If a friend of yours was looking for an employee, would you recommend a person like this?