

College Students' Attitudes Toward Mental Illness: An Examination of the Stigma Process¹

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Undergraduate students (96 female, 72 male) read 3 scenarios depicting either male or female characters with symptoms of depression, alcohol abuse, and common stress. Participants then completed measures assessing their attitudes about the character in the scenarios, as well as their level of social dominance orientation, empathy, adherence to traditional gender roles, and familiarity with mental illness. As predicted, participants who labeled the target *mentally ill* were more likely to view the target as dangerous. This, in turn, led to an increased desire for social distance. In contrast, empathy, although associated with increased likelihood of labeling, was associated with decreased desire for social distance. Implications of the results for reducing the social stigma of mental illness are discussed.

According to the National Institute of Mental Health (NIMH, 2001), one in five adults suffers from a diagnosable mental disorder in a given year. Despite these numbers—as well as the seemingly increased public exposure to mental health issues—many who would benefit from treatment are reluctant to seek help. A recent survey demonstrated that less than 40% of respondents with mental illness had received regular treatment in the past year (Kessler et al., 2001). Furthermore, those who do initiate treatment for their mental illness often fail to adhere to their treatment schedule (Cramer & Rosenbeck, 1998).

A major factor contributing to reluctance to seek and maintain treatment is the continued stigmatization of mental illness (e.g., Corrigan, 2004; Hinkelman & Granello, 2003; Martin, Pescosolido, & Tuch, 2000; Phelan, Link, Stueve, & Pescosolido, 2000; Schnittker, 2000; Schumacher, Corrigan, & Dejong, 2003). Although there has been a recent increase in initiatives aimed at combating stigma and discrimination against mental illness, being perceived and labeled as *mentally ill* continues to foster stereotyping and bias. In order to successfully reduce the negative outcomes resulting from the

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stigmatization of mental illness, it is imperative that we understand the contributing processes.

The Components of Stigma

In their review of the social psychological research on stigma, Link and Phelan (2001) identified four core components of stigma. In the first component, a socially selected human difference is distinguished and labeled. The vast majority of human differences are generally ignored; however, some human differences (e.g., skin color, gender, sexual preference) are deemed socially relevant. In the first step of the stigma process, then, an individual or group is labeled according to some socially relevant human difference.

The second component of stigma involves association between the socially assigned label and a stereotype. For stigmatized groups, the attributes associated with the label are often negative (e.g., dangerous, lazy). The third component of stigma results from labeling and negative stereotyping, and involves the separation of in-groups and out-groups, such that “us” (i.e., the in-group) is distinguished from “them” (i.e., the stigmatized out-group).

Finally, and perhaps most importantly, stigma is associated with discrimination, including status loss, rejection, and exclusion. This occurs when the first three components of stigma (labeling, negative stereotyping, and separating) are perpetuated by a group with more political, cultural, or economic power than the stigmatized group.

In order to change stigma, one must first understand the multifaceted processes that give rise to the devaluation of a group. The goal of the present study is to use the framework outlined previously to examine discrimination toward those with mental illness, as measured by desire for social distance (Bogardus, 1925). In particular, in this study we examine how labeling and negative stereotyping impact desire for social distance toward those with symptoms of mental illness in order to understand better how these three components are interrelated, as well as to identify factors that may influence their likelihood. Further, by examining three different mental health problems—alcohol dependence, major depression, and nonclinical common life stress—we hope to elucidate what aspects of the mental illness stigma process remain constant across conditions and what aspects differ.

Labeling

Consistent with Link and Phelan’s (2001) stigma model, laboratory research has documented that when participants are informed that another

individual is mentally ill, negative attitudes are expressed. In particular, a label of mental illness evokes perceptions of dangerousness and unpredictability (e.g., Angermeyer & Matschinger, 2005; Link, Cullen, Frank, & Wozniak, 1987; Martin et al., 2000).

In laboratory studies, the labeling of a character as mentally ill typically is manipulated. However, outside of the laboratory, people often are not provided with a mental illness label, but rather infer illness from observing deviant behavior. In situations in which mental health is surmised from behavior, the likelihood of a mental illness label being attached to it is likely to vary. Therefore, examining what factors predict when labeling occurs is part of the focus of the present study.

Stereotyping

The second step in Link and Phelan's (2001) model of social stigma is stereotyping. As noted previously, based on a label of mental illness, people may perceive the described individual as dangerous. Despite the public's increased familiarity with mental health issues, the association between mental illness and dangerousness persists, which has a strong negative influence on tolerance (Link et al., 1987; Martin et al., 2000; Pescosolido, Monahan, Link, Stueve, & Kikuzawa, 1999; Schumacher et al., 2003). In fact, there is evidence that this negative stereotype of dangerousness is actually more widely endorsed by society today than it has been in the past (Phelan et al., 2000). In particular, alcohol and drug problems, as well as schizophrenia, seem to connote increased perceptions of dangerousness (Martin et al., 2000; Pescosolido et al., 1999). Furthermore, several studies have demonstrated that these negative stereotypes about mental illness translate into tangible consequences, such as job and housing discrimination (Farina & Felner, 1973; Farina, Felner, & Boudreau, 1973; Farina, Thaw, Lovern, & Mangone, 1974; Link, 1982, 1987; Page, 1995).

Factors Influencing Labeling and Stereotyping

Based on the previously reviewed research and Link and Phelan's (2001) model, it is expected that labeling behavior as mental illness will predict increased perceptions of dangerousness, and increased perceptions of dangerousness will predict an increased desire for social distance. However, previous research has indicated other factors that are likely to influence labeling, stereotyping, and their relationship with social distancing: type of mental health problem, empathy, gender, familiarity, and social dominance

orientation. The second goal of this study is to examine these factors in order to gain a more comprehensive view of the mental illness stigma process.

Type of Mental Health Problem

Previous research has suggested that one factor that may account for variability in the stigma process is the type of mental health problem observed (Link et al., 1987; Martin et al., 2000; Schnittker, 2000). Martin et al. found that behavior indicative of depression was more likely to be labeled as mental illness than was alcohol dependence, although alcohol dependence was more likely to connote increased perceptions of dangerousness and greater social avoidance (also see Pescosolido et al., 1999). Thus, type of mental health problem described is likely to be a significant predictor of both labeling and perceptions of dangerousness and, therefore, social distancing.

In cases in which deviant behavior is the impetus for the label of *mentally ill* (i.e., the label is not learned from another source), the strength of the relationship between labeling and perceptions of dangerousness may also vary depending on type of mental health problem described. For example, behavior that is clearly indicative of serious mental illness (e.g., hearing voices) is probably more likely to be labeled as such. In addition, a person displaying symptoms of serious mental illness is probably more likely to be perceived as dangerous and, therefore, avoided. However, in these cases, labeling may actually have less of an independent effect on subsequent negative stereotyping and social distancing than the behaviors themselves.

Essentially, when behavior is clearly deviant and in violation of social norms, it is likely to evoke a negative response (Cialdini & Trost, 1998). In real life, however, people seldom observe behavior that is unambiguously indicative of mental illness, in contrast to vignette studies using criteria of the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition TR* (DSM-IV-TR; American Psychiatric Association, 2000). Although less severe or more ambiguous deviant behavior may be less likely to be labeled mental illness in general, it is in these gray-area cases that the act of labeling may have a much greater independent impact.

Therefore, the current study uses three types of mental problems that vary in degree of obviousness of the symptoms: major depression, alcohol dependence, and common life stress. Although we expect that degree of labeling will predict negative stereotyping overall (Link & Phelan, 2001), we expect the relationship between labeling and perceptions of dangerousness to be strongest in the common stress scenario, indicating the importance of labeling for subsequent stigma in cases in which symptoms are more ambiguous.

Empathy

Labeling and deviant behavior alone may not account for differences in negative stereotyping and social distancing. Although Link and Phelan (2001) did not discuss personal factors that may affect the stereotyping process, social psychology research suggests the importance of such variables.

Aspects of perceivers' personality may impact their likelihood to label and perceive mentally ill targets as dangerous. For example, an individual's level of empathy might impact tolerance of mental illness. According to Davis (1980), *empathy* includes the ability to take the perspective of another person and to feel non-selfish sympathy and concern for others. Inducing empathy has been shown to improve intergroup relationships and to improve attitudes toward stigmatized groups (Batson et al., 1997; Finlay & Stephan, 2000; Vescio, Sechrist, & Paolucci, 2003). Therefore, it seems likely that an individual's level of trait empathy will be a significant predictor of desire for social distance.

Gender

Both vignette studies and past review of actual diagnosis and treatment statistics have shown that tolerance for mental illness may differ depending on the gender of the mentally ill target (Phillips, 1964; Schnittker, 2000; Tudor, Tudor, & Gove, 1977). Female patients are consistently more tolerated socially than are male patients. However, a recent vignette study (Schnittker, 2000) suggested that the gender difference in tolerance may be mostly a result of differences in perceptions of dangerousness, with women being viewed as less dangerous and, therefore, more tolerated than men, regardless of mental illness.

Perceiver gender might also be important to consider, as females previously have been shown to be more tolerant than males (e.g., Swim, Aiken, Hall, & Hunter, 1995). There is evidence that females' increased tolerance may carry over to tolerance of mental illness, with behavioral research showing that females evaluate mentally ill job applicants more favorably than do males (Farina et al., 1973; Farina & Hagelauer, 1975; Farina, Murray, & Groh, 1978). However, recent research has suggested that gender differences in reactions toward mental illness may be largely a result of differential endorsement of traditional gender roles. Hinkelman and Granello (2003) found that when adherence to traditional gender roles (as measured by the Hypergender Ideology scale; Hamburger, Hogben, McGowan, & Dawson, 1996) was controlled for, gender differences in tolerance of mental illness disappeared. The authors suggested that strict gender-role adherence, not gender, may be a more

accurate predictor of attitudes toward mental illness. In this study, therefore, the impact of both target and participant gender and the impact of gender-role adherence are investigated.

Familiarity With Mental Illness

Familiarity with mental illness has also been implicated by previous research as a factor that might impact mental illness stigma. Allport (1954) first elucidated the possibility that contact with stigmatized groups was likely to decrease negative stereotypes and increase tolerance. Researchers interested in mental illness stigma have found that those who report familiarity with mental illness indicate less prejudicial attitudes on the Opinions About Mental Illness scale (Cohen & Struening, 1962), perceive individuals with mental illness to be less dangerous (Alexander & Link, 2003), and desire less distance from those with mental illness (Corrigan, Edwards, Green, Diwan, & Penn, 2001; Corrigan, Green, Lundin, Kubiak, & Penn, 2001; Link & Cullen, 1986).

Previous work has assessed familiarity with mental illness in general and examined how this impacts attitudes toward individuals who have officially been labeled as mentally ill. In the present study, however, we examine how familiarity with type of mental health problem in the vignette (i.e., either alcohol dependence or major depression) impacts the likelihood to label behavior as indicative of mental illness, perceptions of dangerousness, and social distancing.

Social Dominance Orientation

The third component of the stigma model proposed by Link and Phelan (2001) involves separating “us” from “them.” Although we did not directly assess the extent to which participants separate those with mental illness from their in-group, we did examine participants’ *social dominance orientation* (Pratto, Sidanius, Stallworth, & Malle, 1994) or “the extent to which one desires that one’s in-group dominate and be superior to out-groups” (p. 742). Social dominance orientation (SDO) reflects a general proclivity to separate “us” from “them,” is driven by a strict adherence to stereotypes, and leads to negative attitudes toward members of out-groups, as well as resistance toward efforts to enhance equality between groups (Pratto et al., 1994).

It is expected that SDO will predict desire for social distance from those with mental illness. Those who support separating their in-group from out-groups are also expected to express decreased tolerance for the mentally ill target (Link & Phelan, 2001). SDO might also account for the effects of

participant gender and hypergender ideology that have been found in previous studies (e.g., Hinkelman & Granello, 2003), since males tend to score higher on SDO than do females (Pratto et al., 1994).

The Current Study

According to Link and Phelan (2001), discrimination and status loss result when a group with more economic, political or social power (a) labels a group according to some socially relevant attribute; (b) that label is associated with negative stereotypes; and (c) the stigmatized group is separated from "us." The present study focuses on how mental illness labeling and stereotyping impact desire for social distance. In particular, the study uses vignettes describing a target character's behavior to examine what factors influence whether or not participants label an individual displaying behavior symptomatic of major depression, alcohol dependence, or a common stress as mentally ill, and how this impacts perceptions of dangerousness and social distancing. Examined factors include type of mental health problem; gender of perceiver and target; perceiver's familiarity with mental illness; and perceiver's SDO, adherence to traditional gender roles, and empathy.

The first goal of the present study is to test Link and Phelan's (2001) stigma framework for intolerance toward those with mental illness. It is expected that even when controlling for manipulated (i.e., type of mental health problem, target gender) and measured (i.e., participant gender, familiarity, SDO, hypergender ideology, and empathy) variables, labeling the target character in the vignette as mentally ill will predict increased perceptions of dangerousness, and increased perceptions of dangerousness will predict an increased desire for social distance (Hypothesis 1a). However, since labeling was inferred rather than manipulated in the present study, it is expected that the impact of labeling on perceptions of dangerousness will be particularly influential for the common stress scenario (Hypothesis 1b). While perceptions of dangerousness and a desire for social distance may result from the deviant behavior alone in the alcohol dependence and major depression scenarios (i.e., regardless of whether the condition is attributed to mental illness), the behavior described in the common stress scenario is not likely to be perceived as dangerous, unless it is attributed to mental illness.

The second goal of the study is to expand on Link and Phelan's (2001) framework by examining how type of mental health problem; gender of target and perceiver; and perceiver's familiarity with mental illness, SDO, hypergender ideology, and empathy influence labeling, perceptions of dangerousness, and desire for social distance. Hypothesis 2 predicts that type of mental health problem described will be a significant predictor of

labeling, with major depression the most likely to be labeled as mental illness, followed by alcohol dependence, and finally common stress (Martin et al., 2000).

In addition, it is predicted that type of mental health problem described, gender of the mentally ill target character, and familiarity with mental illness will all be significant predictors of perceptions of dangerousness, even after controlling for the effect of labeling (Hypothesis 3). The target displaying symptoms of alcohol dependence is expected to be perceived as the most dangerous, followed by the character displaying symptoms of major depression, and finally the character with common stress (Martin et al., 2000; Pescosolido et al., 1999). In addition, females are expected to be perceived as less dangerous than males (Schnittker, 2000), and participants who are familiar with a specific mental illness are expected to perceive the target as less dangerous than those who are not familiar with that mental illness (Alexander & Link, 2003).

Finally, we expect type of mental health problem, gender of the mentally ill target, familiarity, empathy, and SDO to emerge as significant predictors of social distance, even after controlling for the effect of labeling and perceptions of dangerousness (Hypothesis 4). Specifically, participants are expected to desire the most social distance from the character with alcohol dependence, followed by the character with depression, and finally the character with common stress (Martin et al., 2000). In addition, participants are expected to desire more distance from male targets than from female targets (Schnittker, 2000). Finally, increased familiarity (Corrigan, Green et al., 2001; Link & Cullen, 1986) and empathy and decreased SDO are expected to relate to decreased desire for social distance.

Method

Participants

Participants were 168 undergraduates (96 female, 72 male) from a small liberal arts college in the Northeast who participated in the study for extra credit. The participants ranged in age from 17 to 22 years ($M = 18.77$, $SD = 0.85$) and were comprised mostly of first- and second-year students (88.7%), with a broad range of majors.

Materials

In the present study, we used three vignettes (one of a character with an alcohol problem, one of a character with major depression, and one of a

character with common stress) that were taken from the General Social Survey (GSS) MacArthur Mental Health Module (Davis & Smith, 1996; see Appendix). The vignettes were modified to make them the same length while maintaining consistency with the DSM-IV-TR (American Psychiatric Association, 2000). The gender of the character depicted was manipulated in both the original survey and in the present study.

Social distance. To assess social tolerance, six social distancing questions based on Bogardus' (1925) original social distance scale were used (Martin et al., 2000; Schnittker, 2000). Specifically, participants were asked how willing they would be to "move next door" to the character in the vignette; "make friends" with the character, "spend an evening socializing" with the character; have that character "start working closely with them on a job"; "have a group home for people like [name] opened in their neighborhood"; and have the character marry into their family.

Participants indicated their willingness on a 6-point Likert-type scale ranging from 1 (*very unwilling*) to 6 (*very willing*). Therefore, high scores on the combined measure indicate decreased social distance, or more social tolerance. Reliability analyses reveal that Question 5 (i.e., the group-home item) lowered the alpha for the scale in all three vignettes. Therefore, it was omitted. Cronbach's alpha for the five-question scale ranged from .82 (for the alcohol dependence vignette) to .88 (for the common stress vignette).

Perceived dangerousness. To assess how dangerous participants perceived the characters in the vignettes to be, three questions were asked. First, respondents were asked to indicate "How likely is it that [name] would do something violent toward other people?" and "How likely is it that [name] would do something violent toward himself/herself?" on a 6-point scale ranging from 1 (*very unlikely*) to 6 (*very likely*; Martin et al., 2000; Schnittker, 2000). In addition, respondents were asked to indicate how dangerous the character in the vignette appears, using a 6-point scale ranging from 1 (*not at all dangerous*) to 6 (*extremely dangerous*). The three questions were averaged for each type of illness condition to create a total perceived dangerousness rating (alcohol dependence, $\alpha = .77$; major depression, $\alpha = .61$; common stress, $\alpha = .79$).

Labeling mental illness. To discover whether or not they would label the character in the vignette as having a mental illness, participants answered the question "How likely is it that [name] is experiencing a mental illness?" This item was rated on a 6-point scale ranging from 1 (*very unlikely*) to 6 (*very likely*; Martin et al., 2000).

Familiarity with mental illness. The amount of contact participants have had with major depression and alcohol dependence was assessed using a modified version of the Level of Contact Report (Holmes, Corrigan, Williams, Canar, & Kubiak, 1999). In this study, two scales were used, one

that assesses participants' familiarity with major depression, and another that assesses participants' familiarity with alcohol dependence.

Each scale consists of 10 statements that vary in level of intimacy with the mental illness and, as in the original version of the Level of Contact Report (Holmes et al., 1999), each item was weighted. The scale ranges from "I have never interacted with a person with [depression/an alcohol problem]," which is weighted as 0, to "I have [depression/an alcohol problem]," which is weighted as 9. Participants were asked to select all statements that applied.

As in the original Level of Contact Report (Holmes et al., 1999), the familiarity score was the weighted score of the most intimate situation indicated by participants. For example, if participants indicated that they "have a relative who has an alcohol problem," (7) and that they "work with a person with an alcohol problem" (4), their score would be 7. Each score could range from 0 to 9.

Adherence to traditional gender roles. To assess participants' adherence to traditional gender roles, we used the short form of the Hypergender Ideology Scale (HGIS; Hamburger et al., 1996). Participants were asked to indicate their agreement with 19 statements on a 6-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Sample questions include "Men should be in charge during sex," and "I believe some women lead happy lives without having male partners" (reverse-scored). Higher scores indicate greater endorsement of traditional gender roles. In the present study, Cronbach's alpha coefficient was .89.

Empathy. Empathy was assessed using two subscales of the Interpersonal Reactivity Index (Davis, 1980): perspective taking and empathic concern. The perspective taking subscale consists of seven questions designed to assess the extent to which the respondent is able to adopt the point of view of others (e.g., "I believe there are two sides to every question and try to look at them both"). The empathic concern subscale consists of seven questions designed to measure amount of sympathy and concern that the respondent feels for others (e.g., "When I see someone being taken advantage of, I feel kind of protective of them"). Respondents indicate the extent to which they feel the statement describes them on a 6-point scale ranging from 1 (*very unlikely*) to 6 (*very likely*). In the present study, the two subscales were highly correlated and, therefore, were combined. Cronbach's alpha was .87 for the combined empathy measure.

Social dominance orientation. The Social Dominance Orientation scale (Pratto et al., 1994) was used to assess the extent to which respondents desire that their own group dominates other groups. The scale, which negatively correlates with a variety of social justice issues, consists of 16 statements, half of which are in favor of equality for all groups (reverse-scored), and half of

which disapprove of equality. Sample statements include “No one group should dominate in society,” and “Some groups of people are simply inferior to other groups.” Participants indicate their feelings toward each of the statements on a 7-point scale ranging from 1 (*very negative*) to 7 (*very positive*). Cronbach’s alpha for this scale was .91.

Apparatus

A website was created to collect all data (Crobak, 2004). It opened with a cover letter informing participants that the research pertains to student perceptions of and reactions to written descriptions of different individuals, followed by an informed consent form. If they agreed to the terms, they were asked to enter their e-mail addresses (for debriefing purposes) and continue. Participants’ e-mail addresses and extra-credit information were appended to separate files in order to ensure anonymity.

Before they viewed the vignettes, participants were asked to indicate their gender, age, class year, and major. The web program then used participant gender to determine the gender of the character in the vignette in order to ensure that the character-gender breakdown was half male and half female for both male and female participants.

Type of illness was manipulated within participants, so every participant read vignettes depicting each of the three types of mental illness (alcohol problem, depression, and common stress). The order in which participants viewed the vignettes varied based on a Latin-square design. The social distance, perceived dangerousness, and labeling questionnaire followed each vignette. After completing all three vignette questionnaires, the web program displayed one of three surveys (either HGIS, empathy, or SDO). The order of surveys was again counterbalanced using a Latin-square design. Upon completion of these surveys, participants were directed to the fourth survey, which assessed familiarity. Once participants finished this survey, a screen thanked them for their participation.

Procedure

Participants signed up for a time slot to take part in the study. Upon entering the testing room, they sat down at an individual computer and read the welcome screen and the informed consent. If they had no questions, they began using the web program. After completing the web questionnaire, participants were free to leave. The number of participants who completed the survey at the same time varied from 1 to 12, but an empty seat was kept

between each of the participants to ensure that their responses remained anonymous. All of the participants who provided their e-mail addresses received a debriefing e-mail after all of the data had been collected.

Results

Order Effects

Initial analyses reveal an effect of the order in which scenarios were viewed on both labeling, $F(5, 162) = 3.38, p < .01$; and perceptions of dangerousness, $F(5, 162) = 3.42, p < .01$. In both cases, this effect appears to have been driven by participants who viewed the common stress scenario first. For labeling, participants who viewed the common stress scenario first were less likely to label the behaviors in the scenarios as mental illness. Participants who viewed the alcohol dependence or major depression scenarios first may have been primed to think about mental illness, and thus were more likely to interpret the behavior in the scenarios as indicative of mental illness. For perceptions of dangerousness, participants who viewed the common stress scenario first were more likely to perceive the target characters in the scenarios as dangerous. Perhaps after rating the target character in the common stress scenario as relatively dangerous, they felt that they had to rate the targets in the major depression and alcohol dependence scenarios even higher by comparison. This effect of scenario was controlled for in the remaining analyses.

Descriptive Statistics and Intercorrelations

Table 1 provides the descriptive statistics for labeling, perceived dangerousness, and social distance as a function of type of mental health problem. As can be seen, the character described with symptoms of major depression was the most likely to be labeled as having a mental illness, followed by the character with symptoms of alcohol dependence, and finally the character with common stress, $F(2, 334) = 158.61, p < .001, \eta^2 = .49$. The character with symptoms of alcohol dependence was perceived to be the most dangerous, followed by the character with depression, and finally the character with common stress, $F(2, 334) = 197.97, p < .001, \eta^2 = .54$. Participants desired the least social distance from the character depicting symptoms of common stress, and the most distance from the character depicting symptoms of alcohol dependence, $F(2, 334) = 388.33, p < .001, \eta^2 = .70$.

Table 1

Mean Labeling, Perceived Dangerousness, and Social Tolerance as a Function of Type of Mental Health Problem

	Alcohol dependence		Major depression		Common stress	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Labeling	4.24 _a	1.24	4.99 _b	1.03	3.14 _c	1.26
Perceived dangerousness	3.63 _a	0.82	3.22 _b	0.77	2.25 _c	0.79
Social tolerance	2.62 _a	0.80	3.32 _b	0.93	4.36 _c	0.73

Note. Significant differences between conditions are indicated by differing subscripts. All *ps* < .001.

Prior to examining our hypotheses, correlations between the measures were computed (see Table 2). As can be seen, the three components of stigma—labeling, perceived dangerousness, and social distance—were all significantly intercorrelated. In addition, the person variables of SDO, hypergender ideology, and empathy were significantly intercorrelated, with increased empathy relating to decreased SDO and decreased hypergender ideology. Participant gender was significantly correlated with depression familiarity, SDO, empathy, and hypergender ideology, with females more likely to indicate lower SDO and hypergender ideology; and greater empathy and familiarity with depression than males. Empathy was significantly positively correlated with labeling and social tolerance, while SDO was significantly negatively correlated with social tolerance.

To analyze Hypotheses 1 through 4, we computed three multiple regression analyses. In the first analysis, labeling was regressed on type of mental health problem, participant gender, character gender, major depression familiarity, alcohol dependence familiarity, SDO, empathy, and hypergender ideology. In the second analysis, perceived dangerousness was regressed on each of these predictors, as well as labeling. Finally, in the third analysis, social distance scores were regressed on the predictors entered in the labeling regression, as well as labeling and perceived dangerousness. Prior to running the analyses, the scores were centered, and type of mental health problem, participant gender, and character gender were dummy-coded.

Table 2

Intercorrelations Among Measures

Measure	1	2	3	4	5	6	7	8
1. Labeling	—							
2. Perceived dangerousness	.49***	—						
3. Social tolerance	-.34***	-.61***	—					
4. Participant gender	-.05	-.05	-.01	—				
5. Depression familiarity	.07	-.01	.03	-.21***	—			
6. Alcoholism familiarity	-.01	.03	.03	.03	.11*	—		
7. SDO	-.09	.06	-.12**	.12**	-.02	.22***	—	
8. Empathy	.15***	.02	.13**	-.24***	.09*	-.07	-.54***	—
9. Hypergender ideology	-.04	.05	-.07	.46***	-.04	.13**	.57***	-.41***

Note. Gender: 0 = female, 1 = male. SDO = social dominance orientation.
 * $p < .05$. ** $p < .01$. *** $p < .001$.

Hypothesis 1a: Testing Link and Phelan's (2001) Framework

Our primary goal in this study was to utilize Link and Phelan's (2001) stigma framework to examine negative attitudes toward mental illness. The hypotheses generated by this framework are that mental illness labeling will significantly predict negative stereotyping—in this case, perceptions of dangerousness—and that perceptions of dangerousness will, in turn, predict social distancing. As can be seen at the top of Table 3, the relationship between the stigma components proposed by Link and Phelan (2001) was supported. Even when controlling for all of the other variables, labeling emerged as a strong predictor of perceptions of dangerousness ($\beta = .36$, $p < .001$), with those who labeled the behavior of the character as indicative of mental illness also perceiving the character to be more dangerous. In addition, perceived dangerousness significantly predicted social tolerance ($\beta = -.31$, $p < .001$), with those who perceived the character to be dangerous indicating less tolerance (i.e., desiring more social distance).

Table 3

Beta Weights for Labeling, Perceived Dangerousness, and Tolerance Regressions

	Mental illness labeling	Perceived dangerousness	Social tolerance
Stigma components			
Labeling	—	.36***	-.06
Perceived dangerousness		—	-.31***
Manipulated variables			
Type of mental health problem ^a			
Dummy-coded Variable 1	.37***	.53***	-.53***
Dummy-coded Variable 2	.62***	.25***	-.27***
Character gender	.00	.13***	-.08*
Measured variables			
Participant gender	-.03	-.07	-.00
Major depression familiarity	.05	-.06	.03
Alcohol dependence familiarity	-.01	.03	.06
SDO	-.04	.07	-.08
Empathy	.14**	.02	.12**
Hypergender ideology	.06	.06	.03
<i>R</i> ²	.32***	.47***	.54***

Note. Gender: 0 = female, 1 = male. SDO = social dominance orientation.

^aBecause there were three mental health problem conditions, as suggested by Aiken & West (1991), dummy coding was accomplished by creating two variables (Dummy-coded Variable 1: Alcohol Dependence = 1, Major Depression and Common Stress = 0, Dummy-coded Variable 2: Major Depression = 1, Alcohol Dependence and Common Stress = 0).

* $p < .05$. ** $p < .01$. *** $p < .001$.

Hypothesis 1b: Impact of Labeling in Common Stress

In addition to testing Link and Phelan's (2001) framework, a subsidiary goal of this study was to examine whether the impact of labeling on perceptions of dangerousness and subsequent social tolerance vary as a function of type of mental health problem. In particular, it was expected that labeling of behavior as indicative of mental illness would more strongly influence

Table 4

Beta Weights for Labeling, Perceived Dangerousness, and Social Tolerance Regressions for Mental Health Problems

	Alcohol dependence	Major depression	Common stress
Perceived dangerousness regression			
Labeling	.29***	.29***	.51***
Social tolerance regression			
Labeling	.03	-.05	-.26***
Perceived dangerousness	-.35***	-.26**	-.32***

Note. Although our interest was in the relationship between labeling, perceived dangerousness, and social tolerance, in order to provide a more conservative test of our hypotheses, we controlled for the other variables examined in the study (i.e., character and participant gender, social dominance orientation, empathy, hypergender ideology, and familiarity).

perceptions of dangerousness in situations in which the behavior described was more ambiguous (i.e., less obviously deviant).

To examine this hypothesis, we first regressed perceived dangerousness on labeling separately for the three mental health problem conditions and then regressed social tolerance on labeling and perceived dangerousness while controlling for participant gender, character gender, familiarity, SDO, empathy, and hypergender ideology. As can be seen in Table 4, labeling significantly predicted perceptions of dangerousness for all three mental health problems. In addition, perceptions of dangerousness significantly predicted social tolerance for all three mental health problems. As expected, however, the relationship between labeling and perceptions of dangerousness was especially strong for the common stress scenario ($\beta = .51$; as compared to $\beta s = .29$ for alcohol dependence and major depression). In addition, labeling emerged as a significant unique predictor of social tolerance only for the common stress scenario ($\beta = -.24$, $p < .01$).

Hypotheses 2, 3, and 4: Expanding Link and Phelan's (2001) Framework

The second goal of the present study was to expand on Link and Phelan's (2001) framework by examining how type of mental health problem, gender of the target and perceiver, and perceivers' familiarity with mental illness,

SDO, hypergender ideology, and empathy influenced labeling, perceptions of dangerousness, and desire for social distance. Results for these hypotheses can be viewed at the bottom of Table 3.

Hypothesis 2: Labeling. It was expected that type of mental health problem described would be a significant predictor of labeling. As can be seen in Table 3, the dummy-coded variables for type of mental health problem were both statistically significant. As expected (and confirmed by the descriptive statistics reported previously), participants were most likely to label the character in the major depression scenario as mentally ill, followed by the character in the alcohol dependence scenario, and finally the character in the common stress scenario. Empathy also emerged as a significant predictor of labeling ($\beta = .14, p < .01$), with participants who indicated greater levels of empathy being more likely to label the character in the scenario as mentally ill. No other variables emerged as significant predictors of labeling.

Hypothesis 3: Perceived dangerousness. Even after controlling for the effects of labeling, it was expected that type of mental health problem described would have a significant impact on perceptions of dangerousness. As can be seen in Table 3, type of mental health problem was a significant predictor of perceptions of dangerousness. Participants perceived the character in the alcohol dependence scenario to be the most dangerous; followed by the character in the major depression scenario; and finally, the character in the common stress scenario.

In addition, as expected, gender of the target character significantly predicted perceptions of dangerousness ($\beta = .13, p < .001$), with male characters perceived as more dangerous than female characters. Contrary to predictions, familiarity with alcohol dependence did not significantly predict perceptions of dangerousness ($\beta = .02, p > .50$), and while the effect of familiarity with depression was in the predicted direction (with increased familiarity predicting decreased perceptions of dangerousness), this effect was only marginal ($\beta = -.06, p = .07$).

Hypothesis 4: Social tolerance. It was again expected that even after controlling for the effect of labeling and perceived dangerousness, type of mental health problem would significantly impact social tolerance. This hypothesis was supported, with participants the most tolerant of the character in the common stress scenario; followed by the character in the major depression scenario; and finally, the character in the alcohol dependence scenario.

In addition, as expected, gender of the mentally ill target character was a significant predictor of social tolerance ($\beta = -.08, p < .05$), with female targets being more socially tolerated than male targets. Contrary to expectations, familiarity with major depression was not a significant predictor of social tolerance ($p > .30$), and familiarity with alcohol dependence was only a

marginally significant predictor ($\beta = .06, p = .07$). As hypothesized, empathy was significantly related to social tolerance ($\beta = .12, p < .01$), with participants who indicated increased empathy showing more tolerance of the characters in the scenarios than participants with lower empathy. Finally, we examined whether a general tendency to separate in-groups from out-groups (SDO) would predict decreased tolerance. Although this relationship was in the predicted direction ($\beta = -.08, p < .08$), it only approached significance.

Discussion

In the present study, our goal was to test the general stigma framework proposed by Link and Phelan (2001) on mental illness intolerance, as well as to expand on this framework by identifying factors that contribute to the components identified as essential to stigma. The results of this study strongly support the theory proposed by Link and Phelan (2001): Labeling predicted an increase in negative stereotyping, and negative stereotyping increased discrimination. Specifically, labeling the described behavior as mental illness predicted increased perceptions of dangerousness, and increased perceptions of dangerousness increased participants' desire for social distance from the target character (i.e., decreased their willingness to have the target move next door, work with them on a job, etc.). Further, although we did not directly test the impact of the third component of stigma identified by Link and Phelan (2001; i.e., separating "us" from "them"), our SDO findings are in line with their expectations. SDO, which reflects a general proclivity to separate in-groups from out-groups, was significantly correlated with increased social distance, although when other factors were controlled for, its predictive power was only marginal.

Link and Phelan (2001) emphasized the importance of distinguishing and labeling human differences. According to their framework, that is the first step in the stigma process. The majority of research examining intolerance of mental illness has examined the impact of labeling when the mentally ill label is manipulated. But what happens when we are not supplied with a label, as is often the case in real life? Our results indicate first that, as would be expected, the likelihood of labeling behavior as mental illness is variable (Martin et al., 2000; Schnittker, 2000) and seems to align with the extent to which the described behavior deviates from social norms.

More interesting, however, is the finding that the impact of labeling behavior as mental illness also varies as a function of type of mental health problem. In particular, labeling explained a greater proportion of variance in perceptions of dangerousness for the common stress scenario, as compared to the major depression and alcohol dependence scenarios. In addition, labeling

emerged as a unique predictor of social tolerance for the common stress scenario, but not for either major depression or alcohol dependence. Perhaps because the behavior in the common stress was less severe and, therefore, more easily attributed to benign sources, it was only those who viewed the target as mentally ill who reacted negatively. For the alcohol dependence and major depression scenarios, however, the behavior was clearly violating social norms. Therefore, it elicited negative reactions, regardless of how it was labeled. We highlight these findings because they may indicate that labeling is an especially important determinant of mental illness stigma when behavior is ambiguous. Future research should investigate this possibility further.

Empathy also emerged as a significant predictor of labeling. Those who indicated higher levels of empathy were more likely to label the character in the scenario as mentally ill. It may be that those who are better at taking the perspective of others, and who are concerned about others, are more able to recognize when someone else is in distress. It should be noted that the labeling of behavior as mental illness, especially when this labeling is accurate (as was the case for the alcohol dependence and major depression scenarios), is not inherently negative.

Labeling is only a detriment to tolerance when the assigned label is associated with negative stereotypes, as is frequently the case with mental illness. However, empathy was a positive predictor of social tolerance. This means that although those who indicated more empathy were more likely to label the target character as mentally ill, they were also less likely to desire social distance from the character. In line with research examining other stigmatized groups, these findings indicate the importance of empathy in decreasing stigma (e.g., Finlay & Stephan, 2000; Vescio et al., 2003). In particular, these results indicate that empathy acts as a means of separating the mental illness label from negative stereotypes and decreased tolerance.

As predicted, gender significantly influenced perceptions of dangerousness and desire for social distance (Schnittker, 2000). Male target characters were perceived as more dangerous and were less tolerated. Differences in perceptions of dangerousness for male characters may be attributed to typical size and strength differences between men and women. However, even when controlling for perceptions of dangerousness, participants desired more distance from male targets than from female targets. This may indicate that mental illness is still seen as more taboo for men, who are socialized to be independent and non-emotional (Basow, 1992). Since, according to Basow, research has shown that men are much less willing than women to seek help for mental health issues, future research should investigate this possibility further.

Many recent studies have shown how familiarity with mental illness reduces negative stereotyping and discrimination (e.g., Alexander & Link,

2003; Corrigan, Green et al., 2001; Holmes et al., 1999; Link & Cullen, 1986). Surprisingly, our study found only very modest support for the positive impact of familiarity. Specifically, familiarity with depression was a marginal predictor of perceptions of dangerousness, and familiarity with alcohol dependence was a marginal predictor of social tolerance: both in the predicted direction.

There are several plausible explanations for our generally weak familiarity findings. First, we assessed familiarity with specific types of mental illness, rather than mental illness in general. However, we examined our criterion variables across mental illness conditions. Although our global analyses may have obscured the impact of familiarity, familiarity did not emerge as a significant predictor, even when regressions were computed separately for each mental health condition.³ That is, just as familiarity with depression did not significantly increase tolerance toward the mentally ill character in general, familiarity with depression did not significantly increase tolerance for the character with depression. Alternatively, the kind of contact participants have had with mental illness may be more important to consider than the amount. It is possible that a participant's contact with mental illness had been negative and, therefore, reinforced rather than diminished negative stereotypes.

The findings of the present study must be interpreted with caution because of several limitations. First, the study participants were college students, which may limit the generalizability of the findings. For example, the norms on a college campus, especially drinking norms, may be quite different than the social norms outside a college campus.

For practical reasons, a vignette and questionnaire format was used. Although this is often the method for researching mental illness stigma (cf. Link, Yang, Phelan, & Collins, 2004), it may misrepresent actual attitudes and behavior. Not only is social desirability a concern, but also our measure for the desire for social distance is attitudinal in nature, not behavioral. Therefore, we do not know for sure how respondents would behave in real-life situations. Finally, although our study varied type of mental health problem, we were limited to investigating only three conditions: depression, alcohol dependence, and nonclinical stress. Whether the results would differ when less common psychological illnesses are under investigation is a topic for future inquiry.

Our findings not only have implications for initiatives aimed at combating mental illness stigma, but also suggest potential avenues for future research. In particular, research examining the stigma process under more ambiguous

³Separate labeling, perceived dangerousness, and social distance regressions were computed for each type of mental health problem. These analyses are available from the authors upon request.

(thus, perhaps more realistic) situations would contribute greatly to our understanding of the intolerance of mental illness. In addition, the field would benefit from research examining actual behavioral implications of increased stereotyping and perceptions of dangerousness, instead of the desire for social distance measure that is used so frequently (e.g., Angermeyer & Matschinger, 2005; Link et al., 1987; Martin et al., 2000).

As for effective ways of reducing intolerance of mental illness, our results indicate that interventions must address the stereotype of dangerousness (see Angermeyer & Matschinger, 2005; Martin et al., 2000). Labeling by itself did not increase participants' desire for social distance: only when this labeling led to an increased perception of dangerousness. Although research has shown that only a small subgroup of people with mental illness who are not in treatment are likely to display violent behavior (Link, Cullen, Struening, Shrout, & Dohrenwend, 1989; Monahan, 1992; Monahan & Steadman, 1994), the link between mental illness and unpredictability and dangerousness is often emphasized in the media (Wahl, 1992; Wilson, Nairn, Coverdale, & Panapa, 1999). For example, almost 40% of articles in U.S. newspapers associate mental illness with dangerousness and crime (Levin, 2005). In order to counteract the negative portrayal of mental illness in the media, accurate information about mental illness should be more readily available.

Finally, our study suggests that empathy may play an important role in reducing stigma. Initiatives aimed at increasing empathy toward mental illness may be particularly effective, as our results indicate that empathy not only increased tolerance, but did so despite also increasing the labeling of behavior as mental illness. Since accurately recognizing behavior as indicative of mental illness may be an important precursor to seeking professional help and receiving social support (at least when the recognition does not result in negative stereotyping), the positive impact of increasing empathy may be twofold. This study, as well as future investigations of mental illness stigma, is important in order to find more effective ways of reducing society's negative attitudes toward those with psychological problems. Reducing stigma is critical so that those with emotional problems will be more likely to seek professional help and receive the social support they need.

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Appendix

Alcohol Dependence

John [Mary] is a man [woman] with a college education. During the last year, John [Mary] has started to drink more than his [her] usual amount of alcohol. In fact, he [she] has noticed that he [she] needs to drink twice as much as he [she] used to to get the same effect. His [Her] family has complained that he [she] is often hung over, and has become unreliable—making plans one day, and canceling them the next. His [Her] friends have also started complaining about his [her] unreliable and sometimes irresponsible behavior. He [She] knows his [her] drinking is causing problems, and several times he [she] has tried to cut down or stop drinking, but he [she] can't. Each time he [she] has tried to cut down, he [she] became very agitated, sweaty, and he [she] couldn't sleep, so he [she] took another drink.

Major Depression

John [Mary] is a man [woman] with a college education. For the past year, John [Mary] has been feeling really down. He [She] wakes up in the morning with a flat, heavy feeling that sticks with him [her] all day long. He [She] isn't enjoying things the way he [she] normally would. In fact, nothing gives him [her] pleasure. Even when good things happen, they don't seem to make John [Mary] happy. He [She] pushes on through his [her] days, but it is really hard. He [She] finds it hard to concentrate on anything. And even though John [Mary] feels tired, when night comes, he [she] can't go to sleep. John [Mary] feels pretty worthless, and very discouraged. John's [Mary's] family has

noticed that he [she] hasn't been himself [herself] for about the last year and that he [she] has pulled away from them. John [Mary] just doesn't feel like talking.

Common Stress

John [Mary] is a man [woman] with a college education. Up until a year ago, life was pretty okay for John [Mary]. While nothing much is going wrong in John's [Mary's] life, he [she] sometimes feels worried, a little sad, or has trouble sleeping at night. Work is going reasonably well, but sometimes he [she] wonders if this is really the right job for him [her]. John [Mary] feels that at times things bother him [her] more than they bother other people and that when things go wrong, he [she] sometimes gets nervous or annoyed. Otherwise, John [Mary] is getting along pretty well, and he [she] enjoys being with other people. Although John [Mary] sometimes argues with his [her] family, especially his [her] younger sibling, he [she] generally has been getting along fairly well with his [her] family.