EXAMINING TWO ASPECTS OF CONTACT ON THE STIGMA OF MENTAL ILLNESS

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This study expands on earlier research by our group that has shown that contact with people with mental illness has significant effects on changing stigmatizing attitudes. Two factors that affect contact are examined in this study: the medium through which contact is experienced, and the level of stereotype disconfirmation engendered in contact. One hundred sixty-four individuals were randomly assigned to one of five conditions. Three of the conditions allowed us to examine the effects of medium: no stigma-control, in vivo contact with moderate disconfirmation, and videotaped contact with moderate disconfirmation. Along with the moderate disconfirmation videotape, two additional videotaped conditions—little or no disconfirmation and high disconfirmations—defined the three groups for our second set of hypotheses on disconfirmation. Research participants completed the Social Distance Scale prior to being assigned to condition and im-

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mediately upon completion. In terms of the medium of contact, results showed that both videotaped and in vivo contact led to significant change in stigmatizing attitudes. Two interesting results were found in terms of level of disconfirmation. First, viewing a videotape of a person with mental illness that does not disconfirm the stereotype (e.g., the person is manifestly psychotic) does not change stigmatizing attitudes. Second, videotapes of people who moderately and highly disconfirm the stereotype lead to significant improvement in attitudes, with nonsignificant trends suggesting that moderate disconfirmation yields better effects. Implications of these findings for future work on changing public attitudes are discussed.

Recent research confirms that public attitudes about mental illness are generally negative and yield deleterious effects on the lives of people with these disorders (Corrigan & Watson, 2002). Three strategies have been identified for reducing public stigma: protest, education, and contact (Corrigan & Penn, 1999). Protest approaches highlight the injustice of specific stigmas and lead to a moral appeal for people to stop thinking that way: “Shame on you for holding such disrespectful ideas about mental illness!” Education strategies have largely focused on replacing the emotionally charged myths of mental illness (e.g., most people with mental illness are highly dangerous!) with facts that counter the myths (e.g., on average, people with mental illness are no more dangerous than the rest of the population). Research suggests that these interventions might lead to mild change in attitudes (Holmes, Corrigan, Williams, Canar, & Kubiak, 1999; Keane, 1991; Morrison, 1980; Penn et al., 1994) and limited change in behavior (Corrigan, Rowan, et al., 2002). Research on contact, however, has shown it to yield the best changes in prejudicial attitudes and discriminatory behavior. Contact refers to a range of strategies that involve the public in meeting and otherwise interacting with people with mental illness.

Research about contact suggests that members of the general public who are more familiar with individuals labeled mentally ill are less likely to endorse prejudicial attitudes (Holmes et al., 1999; Link & Cullen, 1986; Penn et al., 1994; Penn, Kommana, Mansfield, & Link, 1999). More controlled research has shown that members of the general public who engage with a person with mental illness as part of an antistigma program show significant changes in their attitudes (Corrigan, River, et al., 2001). These studies have shown that attitude change resulting from contact maintains over a 1-week follow-up and is related to significant improvement in helping behavior (e.g., donating money to a mental health advocacy group; Corrigan, Rowan, et al., 2002).

Some stigma-change campaigns have used the media to facilitate contact via videotaped presentations in which people discuss their experi-
ences with mental illness and the mental health system (Wahl, 1995; Wahl & Lefkowits, 1989). Media presentations are appealing because they provide an efficient means for changing stigma on a relatively broad scale. One goal of this study is to contrast the effects of in vivo and videotaped contact with the same person with mental illness. Findings from social-psychological research suggest that the effects of media contact may be limited. Face-to-face interaction with members of a stigmatized group is a significant and positive mediator of contact’s effects on changing stigmatizing attitudes (Sigelman & Welch, 1993; Worchel, 1986). Hence, we expect media presentations of contact to yield smaller effects than in vivo contact. Nevertheless, we expect videotaped presentations of contact to yield significant changes in attitudes and behavior compared to those of a control group.

Does all contact, regardless of medium, facilitate attitude change? On one hand, we would not expect interactions with a flagrantly psychotic, semiviolent person living on the streets to change stigmatizing attitudes or behavior. Rather than disconfirm the stereotype, this kind of interaction might reinforce the stigma. Alternatively, media campaigns often try to grossly disconfirm stereotypes by highlighting the experiences of famous people with mental illness. Foci of such efforts include entertainment stars like Rod Steiger, Patty Duke, and Margot Kidder; TV news journalist Mike Wallace; and Nobel Laureate John Nash (Corrigan & Lundin, 2001). Social-psychological research suggests, however, that this kind of contact may have unintended effects. Experiences with persons who grossly vary with stereotypes about a minority group are likely to have little effect on those stereotypes because the glamorous lives of movie stars and Nobel laureates significantly vary with common stereotypes of mental illness. Experiences with markedly “atypical” group members may not only fail to discredit stigma (Hamburger, 1994; Kunda & Oleson, 1995; Macrae, Bodenhausen, Milne, & Castelli, 2001; Rothbart & Lewis, 1988) but may also actually lead to a boomerang effect where stereotypes become more extreme (Kunda & Oleson, 1997). Hence, we expect that media presentations of people with mental illness that moderately disconfirm the stereotype will yield the best effects on stigma.

METHODS

Research participants were drawn from the at-large student body of a local community college. We have used community college students in prior research because they tend to be more demographically representative of the population as a whole than college sophomores from 4-year universities (Corrigan, River, et al., 2001; Corrigan, River et al., 1999;
Corrigan, Rowan et al., 2002). One hundred sixty-four individuals were informed of the study and asked to participate; all agreed and completed all measures. The sample had an average age of 24.7 years ($SD = 9.3$) and was 66.5% female. In terms of marital status, 76.5% were single, 14.1% were married, 2.4% were separated, and 7.1% were divorced. The sample was 50.6% European American, 38.2% African American, 8.8% Latino, 0.6% Asian, and 0.6% Native American; this diversity is important because other investigations have found that ethnicity predicts prejudice against mental illness (Corrigan, Edwards, Green, Diwan, & Penn, 2001). In terms of education, 46.5% had completed high school, 52.4% had received some college or an associate’s degree, and 0.6% had earned a bachelor’s degree. For household income, 25.3% earned less than $20,000, 30.6% earned $20,000 to $40,000, 16.5% earned $40,000 to $60,000, 5.9% earned $60,000 to $80,000, and 14.7% earned more than $80,000.

**STIGMA CHANGE CONDITIONS**

Participants were randomly assigned to one of five groups: (a) in vivo contact that moderately disconfirms the stereotypes; (b) videotaped contact with moderate disconfirmation of the stereotype; (c) videotaped contact with high disconfirmation; (d) videotaped contact with little or no disconfirmation; and (e) a no-stigma change control group. Each condition was conducted by a single leader with four to eight participants, in a quiet room with no distractions. Each program included two parts: a 10-minute presentation immediately followed by a 5-minute discussion. Earlier research has shown that short stigma-change programs like these can lead to significant improvement in attitudes (Corrigan, Rowan, et al., 2002; Penn et al., 1994, 1999).

Two of the research conditions in this study were used in our previous study (Corrigan, River, et al., 1999; Corrigan, Rowan, et al., 2002): the no-change control group, and the in vivo contact group with moderate disconfirmation. The control presentation reviewed “Hobbies and Technology in the 90s” and discussed no issues related to mental illness or physical disability. The in vivo contact condition included a 10-minute formal presentation by an individual with schizoaffective disorder (RKL) who discussed his 20-year history of psychotic symptoms, suicide attempts, multiple hospitalizations, and long recovery periods. RKL has made a satisfactory recovery, lives independently, works, and reports a satisfactory quality of life. Moderate disconfirmation of the stereotype was achieved by balancing the presentation in terms of significant problems that result from mental illness with the ability to live a “normal” life despite having schizoaffective disorder (Corrigan & Lundin, 2001). Af-
after his 10-minute presentation, members of the audience were provided a 5-minute period to freely question RKL about his experiences.

**Videotaped Presentations.** Three 10-minute videotaped presentations were produced for this study featuring RKL in a sit-down interview. The basic life descriptors (e.g., name, age, birthplace) remained constant across the three videotapes. Content varied solely on RKL’s discussion of his experiences with mental illness. The videotape contact with moderate disconfirmation was a verbatim video of RKL’s in vivo presentation. The videotaped contact with little or no disconfirmation focused solely on RKL’s symptoms and the negative impact schizoaffective disorder has had on his life: “I have heard voices which have repeatedly put me in the hospital . . . . Sometimes I am so depressed about my illness I want to kill myself.” Videotaped contact with high disconfirmation briefly introduced RKL’s psychiatric history but then focused on life triumphs that have occurred during the past few years: “I had schizoaffective disorder when I was younger . . . . In the past few years, I have become head of publications for a major university research center, moved into a nice apartment, and traveled the world on business.” Interestingly, none of the information in any of the videotaped conditions was false; rather, the conditions varied solely in terms of focus, with the high disconfirmation centering on RKL’s success and the little or no disconfirmation condition focusing on illness-related symptoms and problems.

Videotapes were played for participants in groups of four to eight by an independent group leader who was not identified as having a mental illness. After the 10-minute video, group participants were given 5 minutes to ask questions about the presentation. To control for presenter effects, four group leaders rotated through the three videotaped conditions and the no-stigma change group.

**SOCIAL DISTANCE SCALE**

The Social Distance Scale (SDS) is a widely used proxy measure of attitudes related to mental illness (Corrigan, River, et al., 2001; Corrigan, Rowan et al., 2002; Link, Cullen, Frank, & Wozniak, 1987; Penn et al., 1994). Originally developed by Bogardus (1928), the SDS samples verbal reports about how much research participants are willing to interact with persons with serious mental illness. The SDS comprises seven questions (e.g., “How would you feel about renting a room in your home to a person with severe mental illness?”), “How about as a worker on the same job as a person with severe mental illness?” rated on a 0 to 3 point willingness scale (3 = definitely unwilling). Participants were simply instructed to “rate the following statements on the following scale about a
person with severe mental illness.” Items are summed (there are no reversed scores) to yield a single index of social distance. Internal consistency for the SDS total score derived from our earlier research has been satisfactory ($\alpha = 0.76$; Corrigan, Rowan, et al., 2002). The SDS was administered before receiving the antistigma strategy and immediately after.

**DATA ANALYSIS**

Two sets of analyses tested the hypotheses in this study. First, to examine the effects of media on contact, group differences were compared across the in vivo moderate disconfirmation condition, the videotaped moderate disconfirmation group, and the no-stigma change control group. Significant differences in change scores (posttest SDS minus pretest SDS) between the in vivo condition and the normal control will replicate our earlier findings showing that in vivo contact leads to significant changes in public attitudes. Significant differences between the in vivo and videotaped condition change scores will support our hypothesis that in vivo contact yields greater change in social distance attitudes than video-mediated contact. Nevertheless, we also expect to show significant differences between change scores of the video contact and the no-stigma control group, albeit less change than the difference between in vivo contact and the control.

The second set of analyses will examine the effects of disconfirmation level and include the three videotaped contact conditions and the no-stigma control group. We expect to show participants in the videotaped contact versions with moderate and high levels of disconfirmation to have significantly greater SDS change scores from pre to post than both the no-stigma change group and the videotaped contact with little or no disconfirmation. We also expect to support our hypothesis that change in social distance will be greater in videotaped contact with moderate disconfirmation compared to videotaped contact with high disconfirmation.

**RESULTS**

**HOW DOES IN VIVO CONTACT COMPARE TO VIDEOTAPED CONTACT?**

Group means of the SDS for the three conditions—no-stigma control, in vivo contact, and videotaped contact with moderate disconfirmation—are summarized in Figure 1. Note that a score of 7 would represent the minimal individual score, suggesting that the re-
spondent is willing to participate in the seven activities individuated by SDS items. The pretest scores in Figure 1 averaged about 10, suggesting that the sample mildly endorsed some social distance prior to participating in the antistigma conditions.

A mixed-model, 3 (antistigma conditions) by × (pre-post SDS scores) ANOVA (between group by repeated-measures analysis) was completed to examine differences in SDS change across groups. Results failed to yield significant main effects for condition, $F(2, 93) = 0.31, ns$, but found significant effects for trial $F(1, 93) = 22.97, p < .0001$, and the interaction, $F(2, 93) = 5.52, p < .01$. Subsequent analyses showed that participants in the in vivo contact and videotaped contact conditions had significantly greater change in SDS scores than individuals in the no-stigma change control group, $F(1, 65) = 10.68, p < .005$ and $F(1, 59) = 6.78, p < .05$, respectively. Although SDS change from pre to post was greater for individuals in the in vivo contact condition than videotaped contact, the difference was not significant $F(1.62) = 1.30, ns$.
HOW DO CONTACT EFFECTS VARY BY LEVELS OF DISCONFIRMATION?

Group means of the SDS scores for the four conditions analyzed to answer this question—no-stigma control, videotaped contact with little or no disconfirmation, videotaped contact with moderate disconfirmation, and videotaped contact with high disconfirmation—are summarized in Figure 2. Once again, a mixed-model, 4 (antistigma conditions) × 2 (pre-post SDS scores) ANOVA was completed to examine differences in SDS change across groups. Results failed to yield significant effects for condition, \( F(3,125) = 1.09, ns \), but showed significant effects for trial, \( F(1,125) = 10.75, p < .001 \), and the interaction, \( F(3, 125) = 2.38, p = .05 \). Subsequent analyses supported several of our hypotheses. The videotaped contact condition with little or no disconfirmation failed to yield SDS change scores from pre to post that differed with the no-stigma change.
group, $F(1, 65) = 0.01, ns$. SDS change for participants in the videotaped contact condition with moderate disconfirmation was significantly greater than the difference in pre-post scores for both the no-stigma change control group, $F(1, 59) = 6.08, p < .05$, and the videotaped contact condition with little or no stigma disconfirmation, $F(1, 62) = 4.56, p < .05$. Note, however, that SDS change for the videotaped contact condition with high disconfirmation was not significantly greater than pre-post scores for the no-stigma change control group, $F(1, 62) = 2.51, ns$ or the videotaped contact condition with little or no stigma disconfirmation, $F(1, 66) = 2.24, ns$. Contrary to our hypothesis, no difference was found in SDS change scores between the videotaped contact with moderate and with high disconfirmation, $F(1, 60) = 0.16, ns$.

**DISCUSSION**

This study meant to extend some of our earlier research that showed that contact with people with mental illness yields significant change in stigmatizing attitudes by examining two questions: what is the impact of different formats of contact (in vivo and videotaped), and how does contact vary by level of disconfirmation? Results from this study replicated our earlier and robust findings that contact yields significant change in attitudes about mental illness, in this case, social distance. These findings echo the results of numerous studies that have shown that contact improves attitudes about minority and other groups (for reviews, see Gaertner, Rust, Dovidia, Bachman, & Anastasia, 1996; Hamburger, 1994; Rothbart & John, 1985; Stephan, 1987). Additional research has identified factors that augment the effects of interpersonal contact, including equal status among participants (Cook, 1985; Riordan, 1978), cooperative interaction (Johnson, Johnson, & Maruyama, 1984; Worchel, 1986), institutional support for contact (Adleifer, 1982; Williams, 1977), frequent contact with individuals who mildly disconfirm the stereotype (Johnston & Hewstone, 1992; Weber & Crocker, 1983), high level of intimacy (Amir, 1976; Brown & Turner, 1981; Ellison & Powers, 1994), and real opportunities to interact with minority group members (Sigelman & Welch, 1993).

Some trends in the results supported aspects of our hypotheses. Unfortunately, other hypotheses remain unsupported. In terms of the medium of contact, both videotaped and in vivo contact led to significant change in social distance compared to the no-stigma control. Although change scores for in vivo contact were larger than for videotaped contact, no significant differences were found between these two groups. This finding was contrary to our hypothesis and the notion that contact
is enhanced by in vivo contact. Failure to support our hypothesis may represent limited sample size; if this trend continues in larger samples, a significant difference would result. Alternatively, this insignificant result may suggest that interaction, where the public and the person with mental illness can freely discourse, must be longer than the 5 minutes provided in this study.

This study also examined three levels of disconfirmation: little or no, moderate, and high disconfirmation. We expected to show that meeting a person with mental illness who does not disconfirm or otherwise challenge the stigma will lead to little attitude change. In support of this assumption, we found that research participants in the little or no disconfirmation condition had almost no change in SDS scores, just like the members in the no-stigma control group. This only makes sense. Meeting a person with mental illness whose symptoms and other problems are highlighted is not likely to challenge one’s stereotype. This may be one reason why mental health service providers are likely to endorse the stigma of mental illness so highly (Mirabi, Weinman, Magnetti, & Keppler, 1985). Treatment providers, especially inpatient clinicians, largely interact with people with mental illness when they are acutely ill, a status that is likely to confirm the stereotype rather than challenge it. Most of these people are frequently discharged before recovery is evident so that the treatment provider does not have an experience that disconfirms the stereotype.

Participants in the videotaped condition with moderate disconfirmation showed significant change in SDS scores compared to both the no-stigma control and little disconfirmation conditions. In comparison, participants in the high disconfirmation group did not show significant SDS change compared to the control and little disconfirmation group. This bit of evidence supports our hypothesis that interaction with people who highly disconfirm the stereotype leads to muted effects in stigma change. The limited effect may result because the public tends to discount people who highly disconfirm the stereotype as exceptions to the rule: “Sure, John Nash can overcome his mental illness because he’s a Nobel Laureate. The homeless mentally ill guy on the street cannot accomplish this kind of recovery.” Unfortunately, our assertions about moderate versus high disconfirmation were not fully supported in this study. We failed to find a significant difference in SDS change scores across moderate and high disconfirmation conditions.

There are several limitations in the reported study to consider in interpreting its findings. Despite using a sample from a community college with better demographic variance than what might be found in a typical group of college sophomores, the sample was still fairly young and almost two-thirds female. Future research needs to determine whether
these findings hold on a more diverse sample. Use of the SDS may have introduced a demand characteristic into the study; namely, participants may have moderated their social avoidance from pre to post scores if they realized that this would be consistent with a socially desirable effect. Fortunately, this effect would not vary across conditions and hence should not undermine cross-group comparisons in change scores. The SDS is fundamentally an attitudinal scale. Subsequent research needs to determine whether similar changes are found in behaviors: increases in helping behavior, and decreases in actual avoidance behaviors. Finally, research needs to determine whether immediate changes after contact identified in this study are maintained over time. As discussed earlier in the article, another study by our group showed that changes that resulted from contact were still evident at a 1-week follow-up (Corrigan, Rowan, et al., 2002).

The number of efforts to affect public attitudes toward people with mental illness is exploding across the United States. Research like this is necessary to inform advocacy groups about approaches that lead to improvement in public attitudes and behavior.

REFERENCES


