STIGMATIZING ATTRIBUTIONS ABOUT MENTAL ILLNESS

Patrick W. Corrigan, L. Philip River, Robert K. Lundin, Kyle Uphoff Wasowski, John Campion, James Mathisen, Hillel Goldstein, Maria Bergman, and Christine Gagnon
University of Chicago Center for Psychiatric Rehabilitation
Mary Anne Kubiak
Prairie State College

Work and housing opportunities of persons with psychosis, substance abuse disorder, and other mental illnesses are significantly hampered by societal stigma. Earlier research by Weiner and colleagues (1988) examined stigmatizing attitudes associated with general health disabilities in terms of attributions about the controllability and stability of these disabilities. The relevance of this model for describing attributions about four psychiatric disorders is examined in this study. One hundred and fifty two adults rated four psychiatric groups (cocaine addiction, depression, psychosis, and mental retardation) and two physical health groups (cancer and AIDS) on six items corresponding with controllability and stability attributions. Findings from a factor analysis supported the distinction between controllability and stability factors. Results also suggested that mental health disabilities were rated more negatively on these factors than physical disabilities. Participants clearly discriminated among mental health disabilities, with cocaine addiction rated most negative in terms of controllability and mental retardation rated most negative in terms of stability. Attribution analyses provide useful information for changing the community’s reactions to persons with mental illness. © 2000 John Wiley & Sons, Inc.

The social dysfunctions and loss of opportunities experienced by persons with severe mental illness are greatly exacerbated by societal stigma (Farina, 1998; Link, Cullen,

Correspondence to: Patrick Corrigan, University of Chicago Center for Psychiatric Rehabilitation, 7230 Arbor Drive, Tinley Park, IL 60477. E-mail pcorriga@mcis.bsd.uchicago.edu

Struening, & Shrodt, 1989; Penn, Guynan, Daily, & Spaulding, 1994). Research suggests, for example, that employers are less likely to hire persons who are labeled mentally ill (Bordier & Drehmer, 1987; Farina & Felner, 1973; Link, 1987), less likely to lease them apartments (Alisky & Iczkowski, 1990; Page, 1977, 1983), and more likely to knowingly press charges against them for violent crimes (Sosowsky, 1980; Steadman, 1981). Hence, advocacy groups like the National Alliance for the Mentally Ill and the National Mental Health Association have identified anti-stigma efforts as a necessary adjunct to clinical services for enhancing the quality of life of people with mental illness. Anti-stigma strategies include education (challenging the myths of mental illness with factual information), protest (making moral appeals to stop stigmatizing persons with mental illness), and contact (facilitating equal interactions between the public and persons with mental illness).

Research conducted by social psychologists suggests these strategies may have limited effects on stereotypes and discrimination (Corrigan & Penn, in press). Changing myths through education may not generalize to broader, less stigmatizing, attitudes about mental illness (Keane, 1990, 1991). Protest seems to yield rebound effects due to social reactance; individuals may develop more negative attitudes to mental illness as a result (Macrae, Bodenhausen, Milne, & Jetten, 1994). Improvements due to positive contact with persons with mental illness may lead to compartmentalization and the conclusion that this experience is not indicative of most people with severe mental illness (Kolodziej & Johnson, 1996).

Theoretically-based description of mental illness stigma may generate models that better inform the anti-stigma efforts of these groups (Corrigan, in press). Researchers have identified three paradigms that explain stigmatizing attitudes about any outgroup: socio-cultural perspectives (i.e., stigmatizing attitudes develop to justify existing community injustices); motivational biases (stigmatizing attitudes develop to meet basic psychological needs); and social cognitive theories (stigmatizing attitudes are understood as knowledge structures that develop from community experience) (Corrigan, 1998; Cockler & Lutsky, 1986). Social cognitive models are especially promising because they provide a rich theoretical base, research methodology, and intervention approach for understanding and changing stigmatizing attitudes at the societal level (Augoustinos, Ahrens, & Innes, 1994; Essess, Haddock, & Zanna, 1994; Hilton & von-Hippel, 1996; Judd & Park, 1993; Krueger, 1996; Mullen, Rozell, & Johnson, 1996). Moreover, research in this area has shown that prejudicial attitudes about outgroups like mental illness relate to behavioral reactions in the community (Fiske, 1998). For example, persons who endorse stigmatizing attitudes are less likely to hire persons with severe mental illness or lease them property.

Attribution theory is one example of a social cognitive model that has been useful for understanding stigma and discriminatory behavior. Attribution theory examines perceived causes of the activities of others. For example, what are the causal factors and future expectancies related to mental illness? In one attribution study (Weiner et al., 1988), 59 students were asked to rate disability groups on items representing two important constructs in attribution theory: controllability (how much is the person versus outside forces, such as the environment or biological disease agents, responsible for a specific disability?) and stability (how much is a specific disability expected to change and improve over time?). Controllability attributions reflect frequently voiced concerns about psychoses, substance abuse disorders, and other mental illnesses; namely, persons with mental illness are to blame for their disorder, should not be pitied, and should be avoid-
ed because they are dangerous (Brockington, Hall, Levings, & Murphy, 1993; Farina, 1998; Taylor & Dear, 1980). Stability attributions reflect concerns about responsiveness to treatments and the likelihood of recovery (Corrigan & Penn, 1997).

Weiner and colleagues (1988) examined differences in controllability and stability attributions across two groups of disabilities: “mental-behavioral” (specific groups include Acquired Immune Deficiency Syndrome (AIDS), child abuse, drug abuse, obesity, and Vietnam War syndrome) and “physical genesis” (Alzheimer’s disease, blindness, cancer, heart disease, and paraplegia). Research participants perceived the mental-behavioral group as more in control of their disorders, less worthy of pity, and worse prognostically than the physical genesis group. Hence, the mental-behavioral group seemed to be the greater victim of stigmatizing attributions. Results of the study by Weiner and colleagues answered an important question about disability stigma: namely, the general public seems to discriminate among disability groups—viewing persons with mental illness more harshly.

Although Weiner and colleagues found the mental-behavioral group to be the object of more negative attributions than the physical genesis group, their selection of psychiatric disabilities seemed to be a heterogeneous mix of mental illnesses (e.g., Vietnam War syndrome, drug abuse) as well as problems that might not be sorted under the typical stereotype of psychiatric disability (child abuse and AIDS). For example, neither child abuse nor AIDS are included in the DSM-IV (American Psychiatric Association, 1994). Hence, it is not clear whether more negative attributions about mental illness reflect attitudes about psychiatric disorders or the effect of the community’s reaction to child abusers and AIDS. One purpose of our study is to examine attributions about selected groups of adult psychiatric disorders that are frequently the victims of mental illness stigma: psychotic disorders, depression, substance abuse, and mental retardation (Corrigan, 1998). We were also extending the question about disability stigma to determine whether the public differentiates among psychiatric disorders; i.e., do they stigmatize psychotic disorders differently than depression? Given the harsh reactions to psychotic disorders and substance abuse (Chappel, 1992; Farina, 1998; Geller et al., 1989; Hamre, Dahl, & Malt, 1994), we believe the public differentially stigmatizes disabilities within the psychiatric spectrum, with attributions about psychosis and substance abuse viewed most negatively.

We suspect, however, that differences across disability groups will vary with specific attributions. For example, persons with psychotic disorders will be viewed as more in control of their disorder than other psychiatric disability groups in the study. Persons with mental retardation will be viewed as having a more stable and worse prognosis than the other groups. Unfortunately, items selected to represent controllability and stability factors were not validated by factor analysis in the study by Weiner et al. (1988). Hence, a second goal of this study will be to determine the structure of attribution factors. We will then use these factors to determine how differences across psychiatric disabilities vary by attribution.

**METHOD**

**Research Participants**

Adults enrolled at a community college in metropolitan Chicago were recruited for this study; they were students in a variety of liberal arts classes. Community college students
were recruited for the study because they tend to be more demographically representa-
tive of the population than 4-year university students. The sample in this study had an
average age of 25.7 years (SD = 9.7) ranging from 17 to 53. The sample was 67.8% fe-
male. It was 35.5% African American, 50.0% European American, 7.9% Latino, and 6.6%
other (including Asian and Native American). In terms of marital status, 76.3% of the
sample were single, 11.8% were married, and 11.9% were separated, divorced, or wid-
owed. In terms of income, 28.3% reported a household income less than $19,999, 27.0%
ranged from $20,000 to $39,999, 21.1% ranged from $40,000 to $59,999, and 23.6% had
a household income greater than $60,000. All of the 152 adults solicited for the study
agreed to participate and completed the measures.

Measure

Participants completed the Psychiatric Disability Attribution Questionnaire (PDAQ) in
cohorts of twenty to forty. The PDAQ was constructed by us based on Weiner et al.’s
(1988) earlier attributional analysis. Weiner and colleagues were concerned about lim-
ited reliability and validity of their measure because of the excessive number of items to
be judged. For example, a measure that included 5 items each addressing controllability
and stability for 10 disability groups would be 1,000 items long, excessively long for
unpaid research volunteers. Hence, we asked participants to rate only six disability
groups on six attribution items. Four of the six disability groups represented commonly
stigmatized psychiatric diagnoses found in the DSM-IV (American Psychiatric Associa-
tion, 1994): mental retardation, cocaine addiction, psychosis, and depression. Psychosis
was chosen as the stimulus term, rather than schizophrenia or severe mental illness, be-
cause a pilot study (n = 20) showed participants were more familiar with the psychosis
label. We completed a second pilot study with 29 participants; it showed that participants
reliably discriminated these four psychiatric diagnoses. We also selected two other dis-
abilities from the list prepared by Weiner and colleagues: cancer, because it was the phys-
ical disability rated most sympathetically by their group, and AIDS because it was rated
highly negatively.

Participants in this study rated each disability group in terms of six attributions
using a 7-point Likert scale (7 = strongly disagree). Attribution items were selected from
the study by Weiner et al. to sample cognitions related to controllability attributions
(blame for problems and deserving pity) and stability attributions (persons benefit from
counseling and from medicine). Two additional items were selected from previous re-
search on mental illness; one for controllability (persons with mental illness should be
avoided (Brockington et al., 1993)) and one for stability (persons with mental illness re-
cover (Fisher, 1994; Miller, Gold, & Smith, 1997)). Research participants completed the
PDAQ twice, with one day intervening, to determine test-retest reliability.

RESULTS

Factor Analysis of PDAQ Items

We examined the factor structure of PDAQ items for each of the disability groups to de-
terminate which factors replicated across disability groups. The results of these six prin-
cipal component factor analyses with varimax rotations are summarized in Table 1. Two
or three factor solutions resulted per group; these empirically derived factors are labeled
<table>
<thead>
<tr>
<th>Attribution Items</th>
<th>Cocaine Addiction</th>
<th>Mentally Retarded</th>
<th>AIDS</th>
<th>Psychosis</th>
<th>Depression</th>
<th>Cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>a</td>
<td>b</td>
<td>c</td>
</tr>
<tr>
<td>1. Stability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counseling</td>
<td>.91</td>
<td>.02</td>
<td>.07</td>
<td>.71</td>
<td>-.10</td>
<td>.24</td>
</tr>
<tr>
<td>Meds</td>
<td>.16</td>
<td>.67</td>
<td>.07</td>
<td>.65</td>
<td>-.19</td>
<td>-.09</td>
</tr>
<tr>
<td>Recover</td>
<td>.81</td>
<td>.22</td>
<td>-.25</td>
<td>.72</td>
<td>.18</td>
<td>.24</td>
</tr>
<tr>
<td>2. Controllability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoid</td>
<td>-.22</td>
<td>.36</td>
<td>.74</td>
<td>.06</td>
<td>.81</td>
<td>.82</td>
</tr>
<tr>
<td>Blame</td>
<td>.05</td>
<td>-.35</td>
<td>.80</td>
<td>.53</td>
<td>.36</td>
<td>.77</td>
</tr>
<tr>
<td>Remaining Item</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pity</td>
<td>.04</td>
<td>.78</td>
<td>-.12</td>
<td>-.07</td>
<td>.63</td>
<td>.21</td>
</tr>
</tbody>
</table>

Note. These findings represent six factor analyses, one for each of the diagnostic groups. Note that two or three factors, labeled a, b, and c, were generated for each analysis. Eigenvalues for all factors were greater than 1.0.
Each factor's eigenvalue exceeded 1.00. We then used a vote-counting method (where trends are discerned through frequency counts of resulting categories (Light & Smith, 1971)) to discern two common factors across disability groups.

The Stability Factor discussed by Weiner and colleagues was found consistently across groups. Factor analyses for four of the six disability groups yielded a factor with the same three items; benefit from counseling, benefit from medication, and will recover. Two of the remaining three items (persons are to blame and they should be avoided) grouped to form a Controllability Factor. These factor structures were used to generate Stability and Controllability Factor Scores for the PDAQ. Scoring was reversed on the Controllability Factor to facilitate consistent interpretation of the two factors. Hence, a high score on controllability represents a negative attribution about the disability group; they are to blame for their disability. A high score on the stability factor also represents a negative attribution; persons will not change over time nor benefit from treatment.

Reliability of the PDAQ Factors

Reliability of the PDAQ Factors is summarized in Table 2. Test-retest reliabilities (with one day intervening) was determined for the two factors across the six disability groups. Results showed individual coefficients were fair to good, ranging from 0.57 to 0.83.

PDAQ Differences Across Disability Groups

Mean and standard deviations of the PDAQ factor scores for each of the disability groups are summarized in Table 3. Results of within group analysis of variance (ANOVAs)

<table>
<thead>
<tr>
<th>PDAQ Groups</th>
<th>Test-Retest Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cocaine addiction</td>
<td></td>
</tr>
<tr>
<td>Stability</td>
<td>.65</td>
</tr>
<tr>
<td>Controllability</td>
<td>.82</td>
</tr>
<tr>
<td>Psychosis</td>
<td></td>
</tr>
<tr>
<td>Stability</td>
<td>.60</td>
</tr>
<tr>
<td>Controllability</td>
<td>.63</td>
</tr>
<tr>
<td>AIDS</td>
<td></td>
</tr>
<tr>
<td>Stability</td>
<td>.79</td>
</tr>
<tr>
<td>Controllability</td>
<td>.83</td>
</tr>
<tr>
<td>Depression</td>
<td></td>
</tr>
<tr>
<td>Stability</td>
<td>.57</td>
</tr>
<tr>
<td>Controllability</td>
<td>.72</td>
</tr>
<tr>
<td>Mentally retarded</td>
<td></td>
</tr>
<tr>
<td>Stability</td>
<td>.64</td>
</tr>
<tr>
<td>Controllability</td>
<td>.75</td>
</tr>
<tr>
<td>Cancer</td>
<td></td>
</tr>
<tr>
<td>Stability</td>
<td>.71</td>
</tr>
<tr>
<td>Controllability</td>
<td>.56</td>
</tr>
</tbody>
</table>

Note. *p < .05; **p < .01; ***p < .001.
Table 3. Mean and Standard Deviations of PDAQ Factor Scores for Each of the Diagnostic Groups

<table>
<thead>
<tr>
<th>Endorse PDAQ factor?</th>
<th>Controllability</th>
<th>Stability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Cocaine addiction</td>
<td>9.2⁵</td>
<td>3.5</td>
</tr>
<tr>
<td>Psychosis</td>
<td>5.3⁴</td>
<td>2.5</td>
</tr>
<tr>
<td>AIDS</td>
<td>5.2⁴</td>
<td>3.0</td>
</tr>
<tr>
<td>Depression</td>
<td>4.1⁸</td>
<td>2.5</td>
</tr>
<tr>
<td>Mentally retarded</td>
<td>3.3²</td>
<td>1.9</td>
</tr>
<tr>
<td>Cancer</td>
<td>2.8¹</td>
<td>1.5</td>
</tr>
<tr>
<td>Results of within group</td>
<td>$F = 183.47$</td>
<td>$F = 87.59$</td>
</tr>
<tr>
<td>ANOVA (d.f = 5, 755)</td>
<td>$p &lt; .0001$</td>
<td>$p &lt; .0001$</td>
</tr>
</tbody>
</table>

Note: Results of post hoc contrasts suggest mean in each column with different superscripts differ significantly ($p < .001$). Superscripts are listed in order of ascending stigma; i.e., higher superscripts represent scores which are more stigmatizing.

showed significant differences ($p < .0001$) across the six disability groups for each factor; the F-tests are summarized at the bottom of Table 3. Post hoc Tukey’s Tests were then completed to examine the group rankings for each factor. Multiple analyses using factors comprised of one to three items may lead to Type I error; hence, we used a conservative alpha for judging results ($p < .001$). Note that even with this conservative criterion, research participants differentiated the six disabilities into five significantly distinct groups for each factor. The superscripts designating post hoc contrast groups are listed in ascending order of stigma; i.e., groups with higher superscripts represent greater endorsement of stigmatizing attributions.

In addition to examining post hoc contrasts, we made sense of scores in Table 3 by comparing group means to a criterion rating representing endorsement of a specific attribution. This comparison would help to determine whether research participants viewed controllability or stability attribution negatively. Given the 7-point agreement scale used to rate PDAQ items (7 = strongly disagree), research participants who rated items comprising the controllability factor greater than four (4 = neither agree nor disagree) viewed the corresponding attribution negatively; i.e., persons are responsible for their disability. There are two items in this factor; therefore, total controllability factor scores greater than eight identify a research participant who endorses a negative view of controllability. Moreover, items comprising the stability factor receiving a score greater than four were viewing this attribution negatively; i.e., persons will not improve. There are three items in this factor; hence, total stability scores greater than twelve identify a research participant who endorses a negative view of stability.

Post hoc analyses for the Controllability Factor showed cocaine addiction was endorsed as the worst of the six disability groups. Moreover, cocaine addiction was the only group to meet the endorsement criterion for this factor; its mean was greater than eight. Cancer was rated least controllable in these groups. Psychosis was rated second to cocaine addiction in terms of controllability. AIDS was ranked equal to psychosis followed by depression and mental retardation.
A different priority was found in terms of the Stability Factor of the PDAQ. Mental retardation was viewed as the most stable and hence, least likely to recover and benefit from counseling and medications. Mental retardation also met the endorsement criterion for the Stability Factor; its mean was greater than twelve. AIDS and psychosis were ranked next stable, followed by psychosis and cancer. Depression was viewed as the most likely to benefit from medications and therapy as well as to recover.

**DISCUSSION**

Results from this study addressed two questions. 1. *What attributions are relevant to mental illness stigma?* We examined whether individual PDAQ items grouped together to form the attribution factors described by Weiner and colleagues (1988). Results from six analyses suggested items from the PDAQ represented two factors corresponding with the earlier study. Stability reflected expectations about the changeability of a disorder and beliefs about responsiveness to therapy. Controllability represented expectations about whether the individual (versus the external or biological environment) caused the disability and attitudes about blaming and avoiding the person as a result. The finding that avoidability and blame comprise controllability agrees with other attribution research (Weiner, 1995). Namely, viewing a person as in control of a situation (like their mental illness) may lead to blame and efforts to avoid that individual.

The number of items in the factor analysis was relatively small. Hence, the content and meaning of factors need to be investigated in further studies like this. These issues were examined in part by evaluating the reliability of factors. The factors were shown to have fair to good test-retest reliability.

2. *How does the public view different mental health disabilities?* Results clearly suggested that, rather than stigmatizing persons with disability equally, students discriminate among disabilities, with psychiatric diagnoses such as cocaine addiction and psychoses viewed more negatively than physical diagnoses like cancer. Of particular interest in this study was the finding that the public seems to also discriminate within the mental health spectrum. Moreover, this discrimination depended on type of attribution. In terms of controllability, cocaine addiction was rated the worst, followed by psychotic disorders and AIDS. Depression was viewed relatively benignly along with cancer. A different pattern was found for stability attributions with mental retardation viewed most negatively. Once again, cancer and depression were viewed more benignly.

The severity of attributions was examined by comparing disability group ratings against the criterion for agreeing with a negative attribution. This criterion was arithmetically determined by summing the minimal agreement rating (4 = neither agree nor disagree) for all items comprising a factor. Results suggest that attributions were, for the most part, not severe. Only ratings about the cocaine addicted group met severity criterion for controllability attributions. Ratings for the mental retardation group met criterion for stability attributions.

**Using this Information to Change Stigma**

Information from studies like these are useful for changing the community's reactions to mental illness through anti-stigma campaigns. In an earlier article, we grouped change strategies for mental illness stigma into three approaches: protest, education, and contact (Corrigan & Penn, in press). We now consider how information from our study may
enhance two of these three strategies. There is significant evidence that protest may have little impact on attitudes and attributions (Macrae et al., 1994). Hence, this discussion focuses on ways to enhance the impact of education and contact on stigma.

Protest is a reactive strategy; it diminishes negative attitudes about mental illness, but fails to promote more positive attitudes that are supported by facts. Education provides information so that the public can make more informed decisions about mental illness. This approach to changing stigma has been thoroughly examined by investigators. Research, for example, has suggested that persons who evince a better understanding of mental illness are less likely to endorse stigma and discrimination (Brockington et al., 1993; Link & Cullen, 1986; Link et al., 1987; Roman & Floyd, 1981). Hence, the strategic provision of information about mental illness seems to lessen negative stereotypes. Several studies have shown that participation in education programs on mental illness and corresponding treatment led to improved attitudes about persons with mental illness (Holmes, Corrigan, Williams, Canar, & Kubiak, in press; Keane, 1990, 1991; Morrison, 1976, 1977, 1980; Morrison, Becker, & Bourgeois, 1979; Morrison, Cocozza, & Vanderwyst, 1980; Morrison & Teta, 1977, 1978, 1979, 1980; Penn et al., 1994, Penn, Kommana, Mansfield, & Link, in press; Thornton & Wahl, 1996). However, the impact of these programs seem to have limited generalization to broader attitudes about psychiatric disability.

There is a small body of research that suggests targeting controllability and stability attributions may significantly diminish stigma (Corrigan, in press; Foersterling, 1985; Weiner, 1985). This research replaced incorrect attributions—e.g., “persons with mental illness are not responsible for their symptoms and cannot care for themselves”—with correct ones; “most persons with mental illness have some control over their behaviors and can live independently with sufficient supports.” Alternatively, changing attributions may involve the provision of information that challenges a specific knowledge structure (Weiner, 1985). Education efforts that facilitate uncontrollability attributions should lead to more public sympathy and greater assistance. Crandall (1994) examined this hypothesis in terms of public attitudes about obesity. He educated a group of research participants on genetics and metabolism related to obesity believing this information would prove to the participants that obesity is uncontrollable. Anti-fat attitudes diminished after learning this information. This approach parallels efforts of the National Alliance for the Mentally Ill to reframe mental illness as a brain disorder (Corrigan & Penn, in press).

Research from our study also suggests anti-stigma efforts must be specific to the diagnostic group. Education programs challenging stigma related to specific disabilities must include myths and facts that directly challenge misconceptions about those groups (Penn & Martin, 1998). For example, research suggests that persons with psychotic illnesses are no more dangerous than the rest of the population except when they are acutely ill; i.e., when their psychotic symptoms and agitation have suddenly changed from baseline (Steadman et al., 1998). This fact does not apply to persons who abuse substances; they tend to be much more dangerous than the rest of the population regardless of mental state (Steadman et al., 1998). Education on this distinction may improve attitudes about persons with psychosis but not change attitudes about persons who abuse alcohol and other drugs.

Stigma is further diminished when members of the general public have contact with persons with psychiatric disabilities who are able to hold down jobs or live as good neighbors in the community. Research has shown an inverse relationship between having con-
tact with a person with mental illness and endorsing psychiatric stigma (Holmes et al., in press; Link & Cullen, 1986; Penn et al., 1994; in press). Hence, opportunities for the public to meet persons with severe mental illness may discount stigma. Research from our study suggests that the positive effects of contact with a member of one group (e.g., persons with mental retardation) would not generalize to a second group (e.g., persons with psychosis). Therefore, anti-stigma programs incorporating contact should include representatives from a diverse set of disabilities to strengthen the breadth of impact.

REFERENCES


