On Stigma and Its Consequences: Evidence from a Longitudinal Study of Men with Dual Diagnoses of Mental Illness and Substance Abuse*

BRUCE G. LINK
ELMER L. STRUENING
Columbia University and New York State Psychiatric Institute

MICHAEL RAHAV
Argus Community

JO C. PHELAN
University of California at Los Angeles

LARRY NUTTBROCK
Argus Community


Numerous studies have demonstrated a strong connection between the experience of stigma and the well-being of the stigmatized. But in the area of mental illness there has been controversy surrounding the magnitude and duration of the effects of labeling and stigma. One of the arguments that has been used to downplay the importance of these factors is the substantial body of evidence suggesting that labeling leads to positive effects through mental health treatment. However, as Rosenfield (1997) points out, labeling can simultaneously induce both positive consequences through treatment and negative consequences through stigma. In this study we test whether stigma has enduring effects on well-being by interviewing 84 men with dual diagnoses of mental disorder and substance abuse at two points in time—at entry into treatment, when they were addicted to drugs and had many psychiatric symptoms and then again after a year of treatment, when they were far less symptomatic and largely drug- and alcohol-free. We found a relatively strong and enduring effect of stigma on well-being. This finding indicates that stigma continues to complicate the lives of the stigmatized even as treatment improves their symptoms and functioning. It follows that if health professionals want to maximize the well-being of the people they treat, they must address stigma as a separate and important factor in its own right.

Recent research has demonstrated a strong connection between the experience of stigma and the well-being of the stigmatized. Numerous naturalistic and experimental studies have shown that stigma affects social interactions (Harris et al. 1992; Sibicky and Dovidio), social networks (Lennon et al. 1989; Link et al. 1989), employment opportunities (Farina et al. 1971; Link 1982, 1987), self-esteem, depression (Link 1987), and quality of life in general (Rosenfield, forthcoming). Stigma has been shown to affect the lives of people with mental illnesses (Link et al. 1989); people experiencing unexplained pain (Lennon et al. 1989; Marbach et al. 1990); gay men (Meyer 1995); people with psoriasis (Ginzburg and Link 1993); and people who are obese (Dejong 1980). Experimental studies have manipulated

* This research was supported by award DA-06968-93 from the National Institute of Drug Abuse. We thank Ann Stueve and three anonymous reviewers for helpful comments. Address correspondence to: Bruce G. Link, Epidemiology of Mental Disorders, 100 Haven Avenue, Apartment 31D, New York, NY 10032; e-mail: bgll@columbia.edu.
the application of labels like homosexuality and mental illness to produce effects on social interaction even for people who have never been tagged with these designations outside the experimental context (Farina, Allen, and Saul 1968; Sibicky and Dovidio 1986).

Nevertheless, some influential researchers believe the effects of stigma are small and transitory. For example, Gove claims that for the “vast majority of mental patients stigma appears to be transitory and does not appear to pose a severe problem” (1982:290). One of the arguments used to support this claim and to downplay the importance of labeling and stigma is the substantial body of evidence concerning the effectiveness of mental health treatments (Gove 1980). In Scheff’s (1966) original statement about the labeling perspective, he argued that the consequences of treatment were primarily negative, due to stigma and to the dehumanizing effects of psychiatric hospitals (Goffman 1961). However, since Scheff’s writings, a substantial and growing body of evidence has emerged demonstrating the positive benefits of mental health treatments. Both psychosocial and pharmacological interventions are effective in curbing the symptoms of, and preventing relapse in, many types of mental disorder. For example, meta-analyses of psychotherapy outcome research have demonstrated positive effects across types of therapies and types of outcomes (Smith, Glass, and Miller 1980). More recent meta-analyses focusing on specific conditions like depression (Robinson, Berman, and Neimeyer 1990) and obsessive-compulsive disorder (Christensen et al. 1987) have also been consistent in reporting positive effects of psychotherapy. Taking a different approach, a large-scale multisite clinical trial evaluating the effects of two highly standardized psychotherapy treatment protocols showed evidence of positive effects for major depression (Elkin et al. 1989). Even for a severe disorder such as schizophrenia, research has shown that multiple and single family interventions have positive treatment effects (McFarlane et al. 1995). Concerning pharmacological treatments, an ever-expanding set of findings from double-blind controlled trials have demonstrated treatment effectiveness for such conditions as schizophrenia (Kane 1989), bipolar disorder (Prien et al. 1984), obsessive-compulsive disorder (The Clomipramine Collaborative Study Group 1991), and major depression (Prien et al. 1984).

Considering the weight of the evidence just reported, it is easy to assume that any countervailing negative effects of stigma must be relatively trivial in comparison. Surely, any effects of stigma are outweighed by the positive benefits of treatment, which are so impressive and extensive. Also, given the emphasis in Scheff’s (1966) theory on the deleterious consequences of contact with treatment systems (“agents of control”) the accumulating evidence regarding treatment effectiveness seems to prove him wrong and some may conclude “all wrong.” However, a study by Rosenfield (forthcoming) questions such assumptions by demonstrating the importance of stigma even within the context of an effective treatment program. In a cross-sectional study, she shows that both services (access to specific interventions) and stigma (Link’s 1987 measure of perceived devaluation and discrimination) are related—in opposite directions—to multiple dimensions of the “quality of life” (Lehman 1983) of people attending a model clubhouse program. Services have positive effects on dimensions of quality of life such as living arrangements, family relations, financial situation, safety, and health, while stigma has equally strong negative effects on such dimensions.

The significance of such dual and opposite processes of stigma and treatment benefits is heightened by an important qualification regarding the impact of mental health interventions. While it is an incontrovertible fact that interventions can produce positive effects, it is also true that the effects tend to be relatively short-lived—that with time treatment benefits evaporate. Thus, for example, Smith and colleagues (1980) in a forcefully positive assessment of the benefits of psychotherapy acknowledge that “the benefits of psychotherapy are not permanent, but then little is” (p. 183). In other arenas, researchers identify the need for “booster” sessions and “maintenance” doses to extend the benefits of psychotherapeutic and pharmacological interventions, respectively (Kupfer, Frank, and Perel 1989; Kupfer, Frank, and Perel 1989). Such efforts speak more to the elusiveness of long-term benefits than to effective means of ensuring that they are achieved. This set of facts leaves open the possibility that other, as yet unidentified processes operate simultaneously.
to offset and ultimately erode treatment benefits. Stigmatization is an obvious possibility along these lines because, as Rosenfield (forthcoming) points out, official labeling can simultaneously lead to positive treatment effects and negative stigma effects.

Pursuing this possibility, and in keeping with Rosenfield's integration and partial accommodation of the so-called psychiatric and labeling perspectives, this paper examines whether aspects of stigma have enduring effects in the context of a longitudinal study of men enrolled in one of two programs that are designed to treat people dually diagnosed with mental disorder and substance abuse. Research on the effectiveness of treatment would lead us to believe that these men will experience improvements in their psychiatric symptoms and substance abuse at least over the short run. Below, we outline our conceptualization of the stigma process and consider how this process might produce negative outcomes even within the context of improvements in symptomatology.

CONCEPTUALIZATION OF THE STIGMA PROCESS

Our conceptualization of the stigma process starts with Jones and co-workers' (1984) two-part definition of stigma as a "mark" that (1) sets a person apart from others and (2) links the marked person to undesirable characteristics. When the person is linked to undesirable characteristics, a third aspect of stigma comes into play—rejection and isolation of the stigmatized person. Stigma is therefore a matter of degree, as the mark or label can vary in the extent to which it sets a person apart; the marked person can be strongly or weakly linked to a variety of undesirable characteristics; and the rejecting response can be more or less strenuous. With respect to mental illness, a clear example of stigma would exist if a person were hospitalized for mental illness (a mark or label) and then assumed to be so dangerous, incompetent, and untrustworthy that avoidance and social isolation ensue. Thus, the concept of stigma as we define it includes both cognitive and behavioral components. It includes cognitive processes in which people—stigmatizers or the stigmatized—use labels to infer that a marked person possesses undesirable characteristics. It also includes the behavioral sequelae of such cognitive processes in which stigmatizers reject the stigmatized or the stigmatized engage in "secondary deviance," such as secrecy or withdrawal, as a means of "defense, attack, or adaptation" (Lemert 1967).

Using this definition of the core features of stigma, we next draw upon and expand the ideas of Link and colleagues (1989) about the process by which stigma comes to influence people marked with undesirable labels. In this framework, there are essentially three components of the stigmatization process: (1) culturally induced expectations of rejection, (2) experiences of rejection, and (3) efforts at coping with stigma.

According to Link and colleagues (1989), culturally induced expectations emerge in the following manner. In the course of socialization, people develop a conception of what it means to be identified as a mentally ill person or a person addicted to drugs. They have ideas about whether most people will reject such individuals as employees, neighbors, and intimates, or whether they will devalue them, believing them to be less intelligent, trustworthy, and competent. These beliefs are of little relevance to the way in which most people conduct their affairs. For example, such beliefs do not affect the search for a job or influence interactions with a new acquaintance. However, when someone becomes labeled as having a mental illness or being addicted to drugs, beliefs about how others will treat such a person take on heightened importance—they become personally relevant. If one believes that others will devalue and reject mental patients, one must now fear that this rejection applies personally. The newly labeled person may wonder, "Will others think less of me, reject me, because now I am a person identified as having a mental illness (or being addicted to drugs)?" In this way, labeling triggers powerful expectations of rejection that in turn erode confidence, disrupt social interaction, and impair social and occupational functioning.

When a person becomes negatively labeled, not only do expectations of rejection become activated, but actual experiences of rejection occur as well (Link and Cullen 1983, 1990; Link et al. 1987). These experiences of rejection, the second component of our conceptualization, range from major exclusions to "put-downs" and slights. For example, Page (1977)
experimentally demonstrated an enormous discrimination effect with regard to the renting of apartments. Landlords were much less likely to indicate that an apartment was available (27%) if a caller was identified as a former mental hospital patient than if he or she was not so identified (83%). Painful put-downs and slights were documented in Rosenhan’s (1973) study in which people without psychiatric disorders posed as patients and entered psychiatric hospitals. The study documented many ways in which pseudo-patients’ legitimate requests were dismissed and their normal behavior interpreted as evidence of psychopathology.

Both expectations and actual experiences of rejection are likely to lead people with mental illness or drug or alcohol problems to seek ways of coping with the threat of rejection. We consider two such responses. In the first—secrecy—clients may choose to conceal their treatment history from employers, relatives, or potential lovers to avoid rejection (Link, Mirotznik, and Cullen 1991). In the second—withdrawal—clients limit interaction to avoid the possibility of rejection (Link, Mirotznik, and Cullen 1991). When clients adopt this response, they are protected from the rejection that might ensue if they ventured out to seek friends, jobs, and the like in the wider social environment.

Based on the foregoing conceptualization, it is possible to identify several mechanisms through which stigma may have enduring effects on people’s lives even if their symptoms or other forms of deviant behavior subside. First, once labeled, it is possible that others may continue to reject the labeled person even when symptoms improve. Second, the trauma of past rejection may continue to haunt the stigmatized person and thereby produce negative outcomes in his or her current life. Third, stigma may have harmful effects not only through direct rejection by others but also via the internalized expectations of rejection on the part of labeled persons, which may continue to operate even if rejection by others dissipates. Fourth, either experiences or expectations of rejection may cause people to adopt coping orientations such as withdrawal or secrecy that may lead to isolation and other potentially harmful consequences. Thus it is theoretically possible for stigma to have harmful and enduring effects through several mechanisms.

We have outlined a conceptual scheme that helps us understand the process through which stigma may have harmful effects on people’s lives and the ways in which such effects may endure even when the person’s deviant behavior subsides. This conceptual scheme has guided previous research demonstrating the deleterious consequences of stigma and strategies for coping with it (Link 1987; Link et al. 1989, 1991). The purpose of the present paper is to determine whether there are any enduring effects of stigma even when treatment effectively reduces substance abuse and symptoms of mental illness. If we find evidence for such enduring effects, we will seek to determine in future studies which of the mechanisms identified above appear to be most important for which outcomes.

RESEARCH STRATEGY

To test the idea that stigma has enduring consequences even when treatment effectively reduces substance abuse and symptoms of mental illness, we examined men with dual diagnoses of severe mental illness and drug/alcohol abuse who were enrolled in model programs designed to treat these conditions. We interviewed these men at entry into treatment, when they were addicted to drugs and highly symptomatic, and then again after a year of treatment, when they were far less symptomatic and largely drug- and alcohol-free.

Our study includes measures that operationalize our major independent variable of stigma as well as several important control variables that measure substance abuse, social functioning, and several dimensions of psychiatric symptomatology. While there are several aspects of people’s lives that might be used to assess the effects of stigma, we have chosen depressive symptoms, as measured by the Center for Epidemiological Studies Depression scale (CES-D), as our dependent variable. We chose this outcome variable because both theory and empirical research suggest its plausibility as a response to stigmatization (Link 1987). Moreover, in this study design, where men remain in treatment for a full year, other outcomes like earned income or social support networks (outside treatment) are not as relevant because they are unlikely to change while the men are in the treatment context.

Using the measures identified above, our longitudinal design allows us to determine
whether stigma has enduring effects over a one-year period. The longitudinal aspect of the design helps us go beyond what can be determined from cross-sectional designs by allowing us to test whether the effects of stigma can be accounted for by either baseline measures of psychiatric symptoms and social functioning, or by changes in such factors over the one-year period. In this way, our design allows us to assess whether stigma continues to impinge on the lives of the men we study or whether the effects of stigma are small and transitory in their lives.

METHODS

Sample

In 1990, a major initiative was launched to provide and evaluate treatment of mentally ill chemical abusers (MICAs) in New York City (Rahav et al. 1995). Clients with a major mental disorder and a history of substance abuse were recruited from hospitals, clinics, shelters for the homeless, the criminal justice system, and other agencies in contact with MICAs in the New York City area. Inclusion criteria were male gender, 21 years of age or older, a major DSM-III-R Axis I disorder, at least two psychiatric hospitalizations, and a confirmed history of abusing alcohol and/or other drugs. Referrals meeting these criteria were evaluated on a battery of psychiatric instruments, assigned to a residential treatment facility participating in the study (either a therapeutic community or a community residence), and reassessed after one year with regard to psychiatric status and substance use.

The present analysis is based on the 84 men who completed one year of treatment in their assigned program (48 in the therapeutic community and 36 in the community residence). Sixty-three percent of the men in the sample are African American, 23 percent are Hispanic, with the remaining 14 percent White or other. The mean age was 34, and the average educational attainment was slightly less than 11 years. Most of the men (58%) had a DSM-III-R chart diagnosis of nonaffective psychotic disorder (mainly schizophrenia). An additional 14 percent had a diagnosis of a major mood disorder (mainly bipolar disorder and major depression) while the remainder had other diagnoses. The social and psychiatric characteristics of these men are described in greater detail in a previous paper (Rahav and Link 1995).

Although our hypothesis is stated without regard to specific treatment contexts, it is possible that the type of treatment influences whether the effects of stigma endure or not. For this reason, we examined the possibility that our findings might vary according to whether clients were enrolled in a therapeutic community or a community residence. Results of these analyses are reported in the text or in footnotes following analyses of the full sample.

Measures

Stigma Variables. Our conceptualization of the stigma process includes three components: culturally induced beliefs about devaluation and discrimination, experiences of rejection, and ways of coping with stigmatization. Devaluation/discrimination is operationalized in this study using a modification of Link's (1987) measure. Respondents were asked to indicate the extent to which they agree with statements like "Most people believe that former mental patients cannot be trusted" and "Most employers will not hire a person who has been hospitalized for mental illness." Response categories are "strongly agree," "agree," "disagree," and "strongly disagree." Because this sample includes people with dual diagnoses of mental illness and substance abuse, the modified version includes items referring to drug abuse as well. The 15-item version we use in this study (alpha = .78) includes seven items that focus on drug abuse and eight focused on mental patient status (see Appendix for item wording).

We operationalized rejection experiences using a 12-item scale (alpha = .80) that once again includes questions regarding drug addiction (six items) and mental patient status (six items). Item content focuses on being avoided, being treated differently, having people feel uncomfortable around the respondent, or dropping the respondent as a friend. All items were asked in a yes/no format and summed to create the scale of rejection experiences (see Appendix for item wording). Some of the items in this scale ask whether the respondent "ever" experienced the form of rejection. Worded in this way we would not expect a
decline in mean levels of rejection over time. What is at issue with regard to this measure is whether its effects on depressive symptoms decline over time as one might expect if the importance of past rejection faded with time and symptom improvement.

We operationalized two forms of coping with stigma. The first—secrecy—is assessed with an 8-item scale (alpha = .72). The content of the items focuses on hiding or keeping secret a history of drug addiction or treatment for mental illness. The second form of coping—withdrawal—is assessed using a 4-item scale (alpha = .78). These items measure the tendency to refrain from applying for a job because it might induce rejection due to addiction or mental illness.2

Depressive Symptoms. Depressive symptoms are operationalized using the CES-D scale (Radloff 1977). This is a highly reliable 20-item measure of depressive symptoms experienced during the past week (alpha in this sample = .87). Typical items refer to self-reported mood (e.g., “Did you feel depressed?”), energy level (e.g., “Did you feel that everything you did was an effort?”), and self-evaluation (e.g., “Did you feel that you were just as good as other people?”). Response categories range from “rarely or none of the time” (coded 0) to “most or all of the time” (coded 3) during the prior week. With all items coded so that higher scores reflect depression, the summed scores have a theoretical range from 0 to 60.

Other Aspects of Psychiatric Condition. Psychotic ideation is a 10-item scale (alpha in this sample = .92) of recently experienced hallucinations and delusions that was adapted from a 13-item scale developed by Dohrenwend and colleagues (1980). It was designed as a screening scale to identify people likely to be diagnosed with schizophrenia, bipolar disorder, and other disorders involving psychotic symptoms.

The Global Assessment of Functioning (GAF) scale is an interviewer rating of overall psychiatric disturbance which has been widely used in psychiatric research (Endicott et al. 1976). Theoretically, the scale ranges from 1, the hypothetically sickest possible individual, to 100, the hypothetically healthiest. The scale is divided into 10 equal intervals, beginning with 1–10 and ending with 91–100. Scores above 80 are for respondents who are not only free of significant symptomatology, but exhibit many traits often referred to as “positive mental health,” such as social effectiveness, warmth, and integrity. Scores from 71 to 80 are for individuals with no symptomatology or only minor symptoms. Scores from 31 to 70 would generally be applied to subjects in need of outpatient psychiatric services. Scores below 30 are for those who need inpatient care and supervision.

The Brief Psychiatric Rating Scale (BPRS) (Overall and Gorham 1962) is a semi-structured interviewer assessment of psychiatric status based on both client reports and observed demeanor during the interview. In this study, the BPRS was administered by a clinically trained psychologist who was also trained in the use of the BPRS. Responses are elicited with regard to nine psychiatric symptoms such as anxiety (“During the past week have you felt tense or uptight?”) and hallucinations (“During the past week, did you hear things that other people couldn’t hear or see, such as noises or voices of people whispering or talking?”). Nine aspects of demeanor are evaluated, such as emotional withdrawal (deficiency in relating to the interviewer), motor retardation (obviously slow movements), and disorientation (lack of orientation to person, place, or time). All items of the BPRS are coded from 1 (not observed) to 7 (extremely severe). A final item, the overall severity of illness, ranges from 1 (normal) to 7 (among the most severely ill). Scores on the 19 items are summed to form an overall psychiatric rating.

RESULTS

Improvement in Psychiatric and Drug Abuse Status

Because our hypothesis indicates that stigma will have enduring effects that coexist with evidence of treatment success, we begin our inquiry by documenting that the men in these treatment programs do in fact improve substantially. Table 1 shows means, standard deviations, and paired t-tests for several dimensions of psychopathology. As the table shows, men who remain in treatment for a year experience dramatic improvements in psychiatric symptoms. Changes range from a low of two-thirds of a standard deviation unit on the baseline CES-D scale to more than two standard deviation units on the GAF scale. Recent
substance abuse (alcohol or drug abuse in the past six months) is very rare at follow-up in these previously addicted men whether abuse is assessed via self-report (10.7%) or by urine tests (11%). Although recent abuse is higher in the community residence program (19.4%) than in the therapeutic community (4.2%) it is clearly dramatically reduced in both contexts, since at baseline all the men had been abusing either alcohol or drugs. When we examined changes in psychiatric symptoms by type of treatment we found significant improvement within each treatment modality for psychotic symptoms, the BPRS, and the GAF scale. The results also showed that the CES-D declined less in the community residence program than in the therapeutic community program, a fact that led us to include a dummy variable to reflect treatment modality in subsequent analyses.

While it is impossible to determine how much of this improvement in psychiatric symptoms and substance abuse is due to treatment and how much is due to spontaneous remission, it is nevertheless clear that improvement has occurred. It is therefore possible to ask whether stigma has enduring effects in the context of dramatic changes in psychiatric condition and substance abuse status.

Do Clients Perceive and Report the Experience of Stigma at the Beginning of Treatment?

Although clients vary in their responses, a majority believe that “most people” will reject people who abuse drugs and have been hospitalized for mental illness. With respect to drug abuse, clients tend to agree that most people will look down on (65%), most employers will not hire (72%), and most young women will not marry (62%) someone who has abused drugs. With respect to hospitalization for mental illness, a similar percent agree that people are rejecting (look down on, 69%; employers refuse to hire, 50%; refuse to marry, 56%). The mean (2.72) for the perceived devaluation/discrimination measure is significantly ($p < .001$) higher than the scale’s midpoint of 2.5, indicating that respondents generally endorse the belief that dually diagnosed clients are devalued and discriminated against.

Clients also reported having experienced rejection associated with drug abuse and mental illness. With respect to drug abuse, 6 percent reported having been denied medical treatment, 16 percent reported having been denied an apartment, and 24 percent reported being paid lower wages because of a history of drug abuse. With respect to having been in a mental hospital, 6 percent reported having lost a job and 10 percent reported being denied an apartment or a room to live in. More clients endorsed items reflecting less severe forms of rejection, such as being avoided (37%) or having a history of psychiatric hospitalization used to hurt one’s feelings (45%). Very few clients reported no incidents of rejection at all (6%), and over 70 percent reported four or more types of rejection.

Finally, clients also endorsed stigma coping strategies of secrecy and withdrawal. For example, with respect to a history of drug abuse, clients are about evenly split as to whether it is a good idea to keep a history of drug use a secret (52% yes vs. 48% no). A large majority (76%) think that it would not be a good idea to tell a potential employer about a history of drug problems. With respect to a history of mental hospitalization, 57 percent believe it is a good idea to keep it a secret, and 75 percent would not tell a prospective

**TABLE 1.** Means, Standard Deviations, and Paired $t$-tests for Psychiatric Symptoms and Drug Use at Baseline and One-Year Follow-Up (N = 84)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Baseline Means (s.d.)</th>
<th>Follow-Up Means (s.d.)</th>
<th>Significance of Paired $t$-tests ($p$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CES-D</td>
<td>23.2 (12.0)</td>
<td>14.7 (11.2)</td>
<td>.001</td>
</tr>
<tr>
<td>Brief Psychiatric Rating Scale (total)</td>
<td>31.1 (7.8)</td>
<td>25.1 (6.4)</td>
<td>.001</td>
</tr>
<tr>
<td>Global Assessment of Functioning (GAF)</td>
<td>42.5 (6.5)</td>
<td>54.9 (6.3)</td>
<td>.001</td>
</tr>
<tr>
<td>Psychiatric Symptoms Scale</td>
<td>8.2 (8.5)</td>
<td>2.7 (4.3)</td>
<td>.001</td>
</tr>
</tbody>
</table>
employer. Many clients also endorse withdrawal as a way of coping with stigma. Most clients would not apply for a job if they knew the employer did not want to hire former drug addicts (57%) or people who had been hospitalized for mental illness (60%).

These descriptive data suggest that most of the clients believe they will be rejected, have experienced at least some form of rejection by others, and have taken steps to avoid such rejection. At the same time, clients also vary in their perceptions, coping efforts, and reported experiences, suggesting the possibility that these stigma-related variables may be associated with important aspects of clients’ well-being such as depressive symptoms.

**Do Reports of Stigma Decline over the Course of One Year of Treatment?**

There are two ways in which the effects of stigma might dissipate. First, the perception of stigma might decline over time in response to improving symptoms or other aspects of the treatment experience. Second, the association between stigma and depressive symptoms (the slope) may decrease over time. Our main interest is in testing the second of these possibilities. However, it is theoretically possible for the slope of stigma on depression to remain constant and significant over time, thereby indicating an enduring effect of stigma, while at the same time mean levels of reported stigma decline in such a way as to reduce depressive symptoms. Thus it is important to evaluate both possibilities to obtain a full understanding of the effects of stigma over time.

Table 2 shows means, standard deviations, and paired t-tests for the four stigma measures at baseline and one year later. As the table shows, there is very little change in the mean levels of these four indicators of stigma over the one-year period. None of the paired t-tests even approaches statistical significance at the .05 level. This indicates that, unlike symptom reports, there are no declines in the perception of stigma, in stigma coping orientations, or in the recall of rejection experiences over the one-year time period while the men were in treatment. Moreover, when we examined these results separately for the two types of treatment, we found no evidence of a decrease in either treatment setting. Thus there is no evidence to suggest that the effects of stigma might have declined because mean levels on the stigma measures declined.

**Does the Association Between Stigma Variables and Depressive Symptoms Dissipate After One Year of Treatment?**

At baseline, perceived devaluation/discrimination and rejection experiences are significantly associated with depressive symptoms ($r = .318, p < .01$ and $r = .307, p < .01$, respectively), while the stigma coping orientations of secrecy ($r = .171$, n.s.) and withdrawal ($r = .033$, n.s.) are not. When entered as a block, the four stigma variables explain 15 percent of the variance in baseline depressive symptoms. The correlation between stigma variables and depressive symptoms, both measured one year later, shows a similar pattern, with devaluation/discrimination ($r = .244, p < .05$) and rejection experiences ($r = .436, p < .001$) significantly related to depressive symptoms, and secrecy ($r = .143$, n.s.) and withdrawal ($r = .034$, n.s.) not. At follow-up, the four stigma variables explain 20 percent of the variance in depressive symptoms, indicating no decline in the importance of stigma-related variables with time. The fact that the stigma-related

<table>
<thead>
<tr>
<th>Variable</th>
<th>Baseline Means (s.d.)</th>
<th>Follow-Up Means (s.d.)</th>
<th>Significance of Paired t-tests (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Devaluation/Discrimination</td>
<td>.272 (.40)</td>
<td>.276 (.41)</td>
<td>n.s.</td>
</tr>
<tr>
<td>Rejection Experiences</td>
<td>.46 (.27)</td>
<td>.42 (.26)</td>
<td>n.s.</td>
</tr>
<tr>
<td>Secrecy</td>
<td>.57 (.28)</td>
<td>.57 (.31)</td>
<td>n.s.</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>.43 (.37)</td>
<td>.44 (.37)</td>
<td>n.s.</td>
</tr>
</tbody>
</table>
variables continue to have a strong effect on depressive symptoms at follow-up indicates that the effects of stigma endure even when indexes of severe psychiatric symptoms (psychotic symptom scale and BPRS) and social functioning (GAF) show dramatic improvement.

This pattern of results makes it seem highly unlikely that stigma-related perceptions and experiences are merely alternate manifestations of symptoms. If the measures were confounded in this way, the mean scores on the stigma measures should have declined from baseline to follow-up. Nevertheless, there are other ways in which psychiatric and drug abuse conditions might account for the correlations between stigma and depressed mood. In particular, it is possible that initial psychiatric condition might account for levels of both stigma and depressed mood one year later. To consider this possibility, Table 3 shows four regression equations relating follow-up perceptions of devaluation/discrimination and rejection experiences to follow-up depressive symptoms while holding baseline symptoms constant. By holding constant baseline symptoms, we partial out of the stigma variables any influence these symptoms may have had on them. Equation 1 shows that follow-up devaluation/discrimination is significantly associated with follow-up depressive symptoms net of baseline depressive symptoms. Equation 2 shows the same pattern of results for rejection experiences. Equation 3 shows that when both rejection experiences and perceived devaluation/discrimination are included, only the former has a unique effect on follow-up depressive symptoms. Equation 4 adds several other measures of baseline psychopathology and shows that the effect of rejection experiences remains significant and quite strong even with these controls. In fact, when we add the two follow-up indicators of stigma (perceived devaluation/discrimination and rejection experiences) to an equation containing treatment setting and the four baseline measures of psychopathology (not shown), we find that the stigma indicators account for an additional 10.9 percent of the variance in the follow-up CES-D. This suggests that stigma has a relatively strong effect on follow-up depressive symptoms and is as important, for example, as baseline depressive symptoms (which account for about 9% of the variance in follow-up depressive symptoms). The pattern of results in Table 3 is robust to changes in the specification of variables included in the equation. Thus if we add to each equation controls for the baseline value of the stigma measure(s) in question, we continue to find that the follow-up measures of stigma have the same pattern of significant effects as shown in Table 3. In addition, if we enter controls for follow-up scores on the BPRS, the GAF, and the psychotic symptoms scale to equation 4, follow-up rejection experiences remains a significant predictor of depressive symptoms. We also conducted analyses entering age, educational level, and ethnicity (African American, Hispanic, and other) as control variables, but because these variables were unrelated to follow-up CES-D with baseline CES-D held constant, and because they did not alter the effects of either indicator of stigma, we did not include them in the equations reported in Table 3. Finally, we tested for two forms of interaction that might have led us to qualify our results. First we tested whether type of

| Table 3: Regression Analyses Showing the Effects of Stigma Variables on Follow-Up Depressive Symptoms Controlling for Baseline Symptoms (N = 84) |
|-----------------------------------|-----------------|-----------------|-----------------|-----------------|
|                                   | Equation 1      | Equation 2      | Equation 3      | Equation 4      |
| Baseline CES-D                   | .354**          | .256**          | .257*           | .115            |
| Treatment Setting (TC = 1; CR-0) | -.219*          | -.240*          | -.235*          | -.219*          |
| Perceived Devaluation/Discrimination | .211*          | —               | .094            | .065            |
| Rejection Experiences            | —               | .386**          | .351**          | .325**          |
| Baseline Brief Psychiatric Rating Scale | —              | —               | —               | .104            |
| Baseline Global Assessment of Functioning | —              | —               | —               | -.181           |
| Baseline Psychotic Symptoms      | —               | —               | —               | .031            |
| R²                               | .184            | .273            | .281            | .323            |

**p < .01; * p < .05.
treatment (therapeutic community vs. community residence) interacted with stigma measures in predicting depressive symptoms but found no evidence of significant interaction. This suggests that stigma has relatively constant effects across the two treatment settings. Second we tested for interaction between stigma measures and outcome levels on the BPRS, the GAF, and substance abuse but again found no evidence of interaction. This means there is no strong evidence to suggest that the effects of stigma are different for people who are doing well with regard to BPRS symptoms, social functioning, and substance use as opposed to those who are doing less well on these dimensions.

DISCUSSION

At the outset of this paper, we drew attention to extensive evidence documenting the short-term positive effects of mental health treatment on symptoms and relapse. Given such strong evidence concerning positive effects of mental illness labeling and subsequent treatment, one might wonder whether any countervailing negative effects through stigma can be of much consequence by comparison. But the evidence also shows that treatment benefits dissipate with time and that, as a result, other processes are likely to operate simultaneously to offset the benefits of treatment. This coupled with theory and research documenting pervasive effects of stigma led us to hypothesize that stigma may have enduring effects on depressive symptoms even in the context of effective mental health and substance abuse interventions. We tested this hypothesis in a longitudinal study of men who showed the expected short-term improvement in their psychiatric and substance abuse conditions from entry into treatment to one-year follow-up. In support of our hypothesis, we found that two aspects of stigma that we identified—perceived devaluation/discrimination and respondent reports of discrimination experiences—continued to affect the men in an untoward fashion even though the men generally improved, presumably in response to the positive effects of treatment.

An alternative explanation that might be offered to account for the association between stigma measures and depressive symptoms is that the stigma measures are confounded with measures of psychiatric symptoms. In this view, the perception of stigma is shaped by symptomatology: Depressed people are sensitive to slights and see them everywhere, paranoid people think others are doing things to get them, and so on. The association between stigma and symptoms and between stigma and other outcomes would ultimately be attributable to this effect of symptoms on stigma measures. But the present study casts doubt on this explanation. If the symptom-stigma association were indeed dominated by such an effect, one would have expected a sharp decline in the perception of stigma when symptoms improved so dramatically. But this did not occur—the mean of the stigma measures hardly changed at all from baseline, when symptoms were high, to one-year follow-up, when they were much lower. The failure of this hypothesis has broader implications, because it points to its ineffectiveness as an alternative explanation for other findings reported in the literature on stigma and its consequences.

One may also argue, consistent with Gove’s (1982) claims, that the effects of stigma reported here are relatively small (“do not pose a severe problem”) and have only been demonstrated to last for one year (“are transitory”). Our finding (reported above) indicates that devaluation/discrimination and rejection experiences uniquely explain over 10 percent of the variance in depressive symptoms at follow-up—an effect that is larger than the effect of baseline depressive symptoms. It is also as large as or larger than the association typically found between many components of the stress process (social support, mastery, stressful life events, chronic stressors) and depressive symptoms (e.g., Pearlin et al. 1981; Turner and Marino 1994). At the very least, then, the effect is not small relative to the kinds of effects that social scientists have taken seriously in other contexts. Moreover, with respect to the short-term or transitory nature of the effects of stigma, our study puts definite limits on what can be claimed regarding the meaning of such terms. We have shown a relatively strong association between stigma and depressive symptoms one year after treatment began. While it is possible that such effects might dissipate over a longer time, their magnitude at one year suggests they would likely endure at least for a while after the one-year mark. Rather than being dismissed as transitory, effects that last as long as this should be
taken seriously as an important aspect of the lives of people who seek treatment for mental health and substance abuse problems.

In the context of these considerations, we believe we have added further evidence of the fundamental importance of stigma as an influence on people with mental illness and substance abusers. Of course, future work will need to assess the external validity of the results by replicating the finding in different contexts, with different types of stigmatizing conditions and different consequences of stigma. To the extent that such future work confirms our results, practical and theoretical implications follow.

From a practical point of view, the finding reported in this study, coupled with the growing evidence from many other studies, raises an important challenge for health care providers. The message is simple: Stigma has important effects, effects that remain even when people improve while participating in treatment programs. Health care providers are therefore faced with the challenge of how to address stigma in its own right if they want to maximize the quality of life for those they treat and maintain the benefits of treatment beyond the short term.

From a theoretical point of view, this study adds evidence to a modified labeling perspective that assigns an important causal role to stigma in producing untoward outcomes or "secondary deviance." It does so by demonstrating that stigma has a substantial and enduring effect on depressive symptoms that operates while people are in treatment. Like Rosenfield (forthcoming), we find that the effects of treatment and stigma coexist and yield a kind of "package deal" of good and bad effects that result from official labeling. The consistent finding of an effect of stigma raises new theoretical questions about the mechanisms through which stigma has enduring effects. Does the effect endure because rejection by others continues unabated? Is it difficult for the labeled person to shake off the mark and the personal meanings attached to it? Or is it the trauma and pain of past rejection that stays with the stigmatized person? Most likely some dynamic interplay between these mechanisms accounts for the enduring effect of stigma. In any event, future research would do well to conceptualize and test these possibilities in order to achieve a more complete understanding of stigma's effects.

NOTES

1. One of the goals of the study as a whole was to evaluate the effectiveness of these two forms of intervention. The therapeutic community is based on a model that involves intense intervention in which members are confronted by one another and given support to make fundamental changes in their lives. The community residence model provides supervised living and access to treatment but involves less of the intense group experience than the therapeutic community. These differences in approach are not of central importance to this paper but we do take account of any effects they may have as described below.

2. The four measures—devaluation/discrimination, rejection experiences, secrecy, and withdrawal—formed separate factors in a factor analysis. The analysis was based on a larger number (N = 267) of subjects. These subjects completed the stigma measures but did not necessarily participate in the longitudinal study that forms the basis of this sample.

3. As we indicated in the measurement section, our rejection experiences scale includes items that refer to whether the respondent "ever" experienced a particular form of rejection thereby precluding a valid decrease in mean levels of rejection experiences over time. Still the recall of rejection experiences might have declined, particularly if reports of rejection experiences are heavily influenced by symptoms so as to produce confounded measurement. For this reason it is instructive to know that reports of rejection did not decline.

4. Measures of coping orientations similar to the ones used in this study have been significantly associated with negative outcomes in other studies (Link et al. 1989, 1991). There are several possible reasons that we failed to find such an association in this study. First, the sample is relatively small. Second, these coping orientations may have effects on outcomes other than depressive symptoms. This is particularly likely for the measure of withdrawal used in this study which is focused explicitly on job procurement. Finally, these coping mechanisms may have been relatively unimportant at this particular time but may have effects for good or ill at other points in the stigmatized person's life.

5. It is important to note that the "ever" wording of some of the rejection items does not detract from our ability to interpret this correlation (or subsequent regression coefficients) as indicating an enduring effect of stigma. The correlation tells us that regardless of when the reported rejections may have occurred the association remains.

6. This result suggests the possibility that rejection experiences predominately over perceived devaluation/discrimination in explaining depressive symptoms. We are reluctant to adopt this inter-
prevention, because the correlation between the
two measures is relatively high ($r = .44$) and the
sample size relatively small, making it difficult to
obtain stable estimates of the unique effects of
these variables. What is more important is that
these different operationalizations of stigma
together explain significant amounts of variance
even when dramatic improvements in psychiatric
and drug abuse conditions have occurred.

7. As we noted above, some of the stigma items ask
for lifetime reports of rejection experiences. As a
result, to the extent that the measures are perfect-
ly valid, one would not expect a diminution of
stigma scores from baseline to follow-up. But the
core rationale for the alternative explanation we
are considering is that the measures are not valid
but rather confounded by a person’s symptoms at
the time of reporting. Thus, according to this
alternative explanation the stigma scores should
decline as symptom-induced negative views of
life in general and stigma in particular diminish
with declining symptoms. The fact that the mean
scores on the stigma variables remain constant
over time is what leads us to doubt the validity of
this alternative explanation.

APPENDIX
Item Wording

**Perceived Devaluation/Discrimination**

1. Most people believe that former mental patients cannot be trusted.
2. Most women would not marry a man who has been a patient in a mental hospital.
3. Most people believe that a man who has been hospitalized for mental illness is dangerous.
4. Most people think less of a person after he has been hospitalized for mental illness.
5. Most people look down on people who have been hospitalized for mental illness.
6. Most people think that mental patients are just as intelligent as the average person.
7. Most employers will not hire a person who has been hospitalized for mental illness.
8. Do you believe that many people are afraid of those people who have been patients in mental hospitals?
9. Most people believe that drug addicts cannot be trusted.
10. Most women would not marry a man who has been addicted to drugs.
11. Most people believe that a man who has been addicted to drugs is dangerous.
12. Most people think less of a person after he has been hospitalized for drug problems.
13. Most people look down on people who have been hospitalized for drug problems.
14. Most people think that drug addicts are just as intelligent as the average person.
15. Most employers will not hire a person who has been addicted to drugs.

**Rejection Experiences**

1. Did some of your friends treat you differently after you had been a patient in a mental hospital?
2. Have you ever been avoided by people because they knew you were hospitalized in a mental hospital?
3. Have people used the fact that you were in a mental hospital to hurt your feelings?
4. Have you ever been refused an apartment or a room because you had been a patient in a mental hospital?
5. Do you sometimes avoid people because you think they might look down on people who were in a mental hospital?
6. After being hospitalized for mental illness were people uncomfortable around you?
7. Did some of your friends reject you after they found out you were using drugs?
8. Did some of your family give up on you when they found out you were using drugs?
9. Were some people afraid of you when they found out you used drugs?
10. Have people treated you unfairly because they knew you were a drug addict?
11. Do you sometimes avoid people because you think they might look down on people who have had a drug problem?
12. Have some employers paid you lower wages because they knew you had a drug history?

**Secrecy**

1. Do you sometimes hide the fact that you were a patient in a mental hospital?
2. Do you think it is a good idea to keep your history of mental hospitalization a secret?
3. Would you advise a close relative who had been treated for mental illness not to tell anyone about it?
4. Do you wait until you know a person well before you tell them you have been a patient in a mental hospital?
5. Do you sometimes hide the fact that you were once addicted to drugs?
6. Do you think it is a good idea to keep your history of drug use a secret?
7. Would you advise a close relative who had a serious drug problem not to tell anyone about it?
8. Do you wait until you know a person well before you tell them about your problem with drugs?

**Withdrawal—Employment**

1. Would you apply for a job if you knew the employer was going to ask about your history of mental hospitalizations?
2. Would you apply for a job if you knew the employer didn’t like to hire former mental patients?
3. Would you apply for a job if you knew the employer would ask about your history of drug use?
4. Would you apply for a job if you knew the employer didn’t like to hire former drug addicts?
REFERENCES


**Bruce G. Link** is associate professor of public health at Columbia University and a Research Scientist at New York State Psychiatric Institute. His research interests include the impact of labeling and stigma on people with mental illness, the association between mental illness and violence, and the social epidemiology of mental and physical illnesses.

**Elmer L. Struening** is Director of the Epidemiology of Mental Disorders Research Department, New York State Psychiatric Institute, and Associate Professor, Columbia University. His current research is focused on the social and psychological experience of people who are caregivers for people with mental illness, on the evaluation of treatment programs for people with mental illness, and on the social experience of homelessness. He also has a strong interest in the influence of attitudes toward mental illness on the welfare and behavior of people with mental disorders.

**Michael Rahav** is Director of Research and Evaluation at Argus Community Inc. and the Principal Investigator on a National Institute of Drug Abuse grant to study homeless, mentally ill, chemically abusing men. His research focuses on family and social conditions associated with the homelessness–mental illness–chemical abuse syndrome.

**Jo C. Phelan** is assistant professor of sociology at the University of Southern California. Her research interests include homelessness, social stigma and attitudes, and actions related to inequality and its legitimation.

**Larry Nuttbrock** is Project Director at the National Development Research Institute (NDRI) in New York City, evaluating the delivery of services to homeless people. His research interests focus on the social experience of homeless, substance-abusing men and women.