ORIGINAL ARTICLE

Caroline E. Mann · Melissa J. Himelein

Putting the person back into psychopathology: an intervention to reduce mental illness stigma in the classroom

■ **Abstract** *Objective* This research aims to compare the effectiveness of two methods of teaching psychopathology in reducing stigma toward mental illness. Based on previous stigma research, a first-person, narrative approach was contrasted with traditional, diagnosis-centered education. *Study 1 methods* Participants consisted of 53 undergraduates at a small, public university enrolled in two introductory psychology classes. During six hours of class time focused on psychopathology, one class received the experimental pedagogy while the other served as a control, receiving traditional instruction. Stigma was assessed pre- and post-intervention using a social distance scale and vignette design. Statistical analyses compared means and change scores between the two classes. *Study 1 results* Students in the experimental classroom showed a significant decrease in stigma following the intervention, whereas those in the control group showed no change. *Study 2 methods* A follow-up study was conducted to replicate the promising effects demonstrated in Study 1. Two additional classrooms ($n = 48$) were both exposed to the first-person, narrative pedagogy, and their stigma monitored pre- and post- intervention. *Study 2 results* Students reported a significant decrease in stigma following the intervention. *Conclusions* Together, these studies suggest that traditional methods of teaching psychopathology do not lessen mental illness stigma, a serious concern that can potentially be reconciled by incorporating more person-centered instructional methods. Results are discussed in terms of their implications for the way psychopathology is taught throughout the mental health field, as well as the practical application of stigma interventions woven into the curriculum.

■ **Key words** stigma – mental illness – intervention – perspective-taking – teaching

Introduction

A large body of empirical evidence now confirms the US Surgeon General's (1999) report, which identified stigma as the number one barrier to mental health treatment in the United States. Among individuals diagnosed with "mental illness"[1] increased perceived stigma has been consistently associated with reluctance to seek treatment, discontinuation of psychiatric medication, low self-esteem, and social impairment [23, 33, 41, 42]. The stigma that these individuals perceive is real. Indeed, research has shown that prejudicial attitudes about mental illness lead to discrimination in jobs and housing, and limit the amount of resources allotted to mental health services [12, 19], imposing multiple barriers to recovery.

Given the detrimental effects of stigma, researchers have sought to develop interventions aimed at reducing this prejudice. However, to date only two such strategies have garnered empirical support: contact and education. Contact interventions facilitate interaction between participants and individuals who have experienced a mental illness. For example, in a

C.E. Mann, BA (✉)
Psychology Dept.
University of Tennessee at Knoxville
Knoxville (TN), USA
E-Mail: cmann4@utk.edu

M.J. Himelein, PhD
Psychology Dept.
University of North Carolina at Asheville
Asheville (NC), USA

[1]The word "mental illness" is used throughout this paper to refer to a broad spectrum of psychological troubles society often labels as "mental illnesses" or "psychiatric disorders". This term was chosen in order to remain consistent with previous literature, and for the sake of simplicity. However, it should be noted that "mental illness" is a problematic term because studies suggest this language may actually increase stigma [44], and our own research indicates it is not a unitary construct [16]. Therefore, we employ this imperfect language with caution.

randomized control trial of contact, participants who cooperated with a person diagnosed with a mental illness on a shared activity reported more positive attitudes toward persons with psychological disorders [15]. Research shows that this attitude change is maintained one week later and corresponds to increased helping behavior [14]. Contact is most effective when there is "equal status" between individuals with mental illness and participants, as in the case of students speaking with other students or two persons cooperating on a task [11].

Although research shows contact interventions result in greater reduction of stigma than does education, it is the latter approach that has been embraced as a panacea for stigma in recent years [13]. Educational programs involve presentation of factual information about the characteristics and treatment of mental illness. Special efforts are made to provide content that might counteract stigmatizing beliefs such as the myth that people with psychological disorders are dangerous. Research indicates that such educational interventions can lead to significant decreases in mental illness stigma [20, 29, 32]. However, not all forms of education are equally effective. Specifically, Corrigan and Penn [11] identified four key factors associated with successful educational interventions: including personal information about the individual diagnosed with mental illness, directly attacking myths, increasing empathy through simulations, and including discussion.

Researchers have also identified key factors that are *not* effective in reducing stigma, most notably—a focus on biological or genetic causal beliefs. Multiple studies by Read et al. [35, 36, 43] suggest that individuals who believe mental illness is caused primarily by genes or biology are more likely to behave aggressively toward persons with psychological disorders, and to report higher levels of stigma than individuals who have psychosocial causal beliefs.

In light of the research on combating stigma, it is interesting to consider how information on mental illness is presented in undergraduate psychology courses. Psychopathology classes are the second most frequently offered courses in departments of psychology [34], exposing thousands of young adults to information about mental illness each semester. Yet, these courses are typically dominated by lectures on symptoms and diagnoses [18], in a format antithetical to the key factors identified by Corrigan and Penn [11]. Most textbooks in the field emphasize DSM criteria, and psychology students often memorize symptoms of specific mental illnesses much like medical students memorize symptoms of physical disease. While such pedagogy may be effective in communicating diagnostic categories, its impact on stigma is unclear.

The topic of psychopathology is also an important component of introductory psychology [27], which has long been ranked among the most popular of college courses in any discipline [1]. Chapters in introductory

textbooks tend to promote a medical model, and multiple-choice testing—the norm in such classes—encourages sharp categorization. This approach, emphasizing labeling rather than understanding, may be especially detrimental because such courses are often students' first, or only, exposure to mental illness.

Stigma interventions built into college courses are highly practical, but research on their efficacy is mixed. Two studies examining curriculum-based interventions with undergraduate classes have shown reductions in stigma [29, 30], while one demonstrated no effect [17]. Flaws in methodology and outdated samples make these results difficult to interpret. The only study to include a control group [17] is nearly four decades old and failed to provide a clear outline of the educational intervention. However, successful interventions appear to be based on a psychosocial rather than medical model.

In a more methodologically rigorous study conducted with medical students, Coodin and Chisholm [9] co-taught an intervention program with consumers who were recovering from schizophrenia, which included an emphasis on personal narratives. Compared to students in the control condition, students in the treatment group showed improved attitudes toward individuals with schizophrenia, a finding the authors attribute to "a more holistic understanding of patients" and "the countering of a possible overemphasis on diagnosis" (p. 299). Schulze and colleagues [37] achieved similar results with high school students, employing an intervention that combined contact and education with an emphasis on empathic relating.

In the current study, we devised an alternative method of teaching psychopathology to introductory psychology students, based on the key factors identified by Corrigan and Penn [11] and the existing literature on classroom interventions. This approach, which emphasized first-person perspectives of mental illness, was designed to merge the effective factors of both education and contact interventions. The inclusion of first-person narratives is seen as a form of vicarious contact, drawing heavily from literature in the field of social psychology, where researchers have successfully used first-person narratives to manipulate the variable of perspective-taking. Studies demonstrate that taking the perspective of another leads to increased empathy and decreased stereotyping of out-group members [4, 16]. Previous research has also demonstrated that "contact" need not be "live" to be effective. For example, videotapes of individuals sharing their experiences with mental illness yield similar results to in-vivo interaction [38].

In two separate studies, we compared the effectiveness of the first-person narrative method with a traditional classroom approach in reducing stigma toward individuals diagnosed with mental illness. We hypothesized that students in the first-person condition would show greater decreases in mental illness stigma following a two-week section on psychopa-

thology than would their counterparts in the traditional classroom. To examine the practical aspects of such an intervention, we also monitored students' academic achievement and satisfaction during this section of the course.

Study 1 methods

■ Sample

Participants consisted of 53 students (20 men, 33 women) enrolled in two introductory psychology classes at a small, public, liberal arts university in the southeast. The sample was predominately white (87%) with an average age of 18.9. Statistical analyses revealed no significant differences between the two groups in terms of gender, race, age, or religion.

■ Procedure

After securing approval from the institutional review board and obtaining informed consent from all participants, one class was randomly selected as the experimental condition while the other received traditional instruction. Because of its emphasis on first-person narratives and idiographic characteristics, the experimental method was termed *the humanizing approach*, whereas the traditional method was called *the diagnostic approach*.

The two groups ($n = 27$, $n = 26$) had identical textbooks and similar curricula, but differed in the way the material was presented. Special effort was made to ensure equal amounts of class participation and in-class activities so that students in both classrooms remained equally engaged.

During the two-week section on abnormal psychology, participants in the humanizing classroom read first-person narratives by authors with depression, schizophrenia, and bipolar disorder. Key psychiatric symptoms were deduced from these excerpts rather than provided didactically. In order to incorporate the element of equal status, critical to successful contact interventions, participants were shown a video documentary[2] presenting the perspectives of three young adults, two of whom are college students, recently diagnosed with a mental illness. The documentary contains interviews with the young adults as well as their friends and family members, and the interviewees describe a variety of explanations for their psychological difficulties. Approximately half of the 60 min video was incorporated in class.

Finally, students in the humanizing group completed a poetry assignment modeled after that of Christler [5], in which they were instructed to write

from the perspective of someone with schizophrenia or bipolar disorder. There were no literary constraints; they were told only to strive for emotional accuracy in their depiction of feelings, thoughts, and behaviors. This task was recently shown to improve empathy toward persons with mental illness in a similar population of undergraduates [6].

In the diagnostic condition, students learned the DSM-IV criteria directly, read excerpts written by clinicians rather than patients, and viewed a third-person perspective video. Instead of the poetry assignment, students participated in a diagnostic task in which they read an ambiguous case study and diagnosed the individual based on DSM-IV criteria.

■ Measures

Participants completed a one-page pretest and posttest survey containing demographic questions, a vignette-design stigma measure, and questions assessing their attitudes toward the class activities. Scores on the classroom exam on psychopathology were obtained from instructor records and used as a measure of psychiatric knowledge. On the posttest, participants also rated the primary class activity (poetry vs. diagnostic exercise) in terms of how helpful, enjoyable, and thought-provoking it was.

Stigma toward bipolar disorder and schizophrenia was assessed using a vignette design taken from Mann and Himelein [25]. This measure asked participants to read paragraph-long vignettes about two individuals with mental illnesses: "Bill", who had bipolar disorder, and "John", who had schizophrenia. Following each vignette were six questions adapted from a social distance scale [8], which measured respondents' comfort with Bill and John in situations such as having a conversation or dating (1 = very uncomfortable, 5 = very comfortable). The reliability for both scales was very good (Cronbach's alphas = 0.82 and 0.84).

Study 1 results

On the pretest, across both conditions, the mean score on the stigma scale for the schizophrenia vignette was 14.82 ± 4.20 and the mean score for the bipolar vignette was 18.48 ± 4.58 (theoretical range 6–30). This difference was statistically significant ($t = 7.77$, $df = 52$, $P < 0.001$), indicating more negative perceptions of schizophrenia than of bipolar disorder (higher scores indicate greater comfort). This difference remained post-intervention, with the mean score for schizophrenia ($M = 15.49 \pm 4.51$) significantly lower than for bipolar disorder ($M = 19.53 \pm 4.71$; $t = 11.20$, $df = 50$, $P < 0.001$).

Because there was a strong correlation between participants' stigma scores for the two vignettes ($r = 0.85$, $P < 0.01$), we combined them to produce a

---

[2]The film shown was "First Break", directed by: Adreinne Amato, Derek Rogers, 50:55 running time, 1997 National Film Board of Canada, in Montreal Quebec.

total stigma score for each participant (theoretical range 12–60). Total stigma scores on the pretest were not significantly associated with age, race, or religion, but the comparison for gender approached significance ($t = 0.65$, $P = 0.08$), with females ($M = 33.87.5 \pm 7.00$) reporting slightly less stigma (i.e., greater comfort) than males ($M = 32.37.5 \pm 9.75$). The two classrooms (humanizing vs. diagnostic) did not differ in their pretest stigma scores.

Analyses revealed no significant difference between pretest and posttest stigma scores for the diagnostic group, indicating that attitudes were unchanged by traditional diagnostic education. For the humanizing group, however, there was a significant difference between pretest and posttest stigma scores ($M = 32.63 \pm 9.29$ vs. $M = 35.76 \pm 9.8$; $t = -3.27$, $df = 25$, $P < 0.01$), indicating that participants' attitudes improved following the intervention.

To directly compare the two conditions, difference scores were calculated for each participant by subtracting their total stigma scores on the pretest from their total stigma scores on the posttest, yielding a single indicator of stigma change. Following the interventions, the humanizing group reported significantly greater improvement in stigma scores than did the diagnostic group ($M_{diff} = 3.13$ vs. $M_{diff} = 0.26$; $t = 2.22$, $df = 49$, $P < 0.05$). There was no significant difference between groups on classroom exam performance.

Compared to diagnostic group participants' ratings of the case study exercise, students in the humanizing group rated the poetry exercise as more enjoyable ($M = 3.44 \pm .58$ vs. $M = 3.10 \pm .54$; $t = 2.07$, $df = 44$, $P < 0.05$) and more thought-provoking ($M = 3.68 \pm .48$ vs. $M = 3.14 \pm .65$; $t = 3.22$, $df = 44$, $P < 0.01$), theoretical range 1–4. However, there was no significant difference in students' ratings of the helpfulness of the two exercises.

Study 2 methods

While Study 1 showed promising results, it is possible that these changes were a one-time occurrence influenced by class dynamics or confounding variables. To rule out this possibility, we conducted a second study testing our hypotheses. Because the diagnostic approach failed to demonstrate any effects in reducing stigma in Study 1, we were uncomfortable with the prospect of exposing either class in Study 2 to this method. Therefore, in Study 2, both classrooms received instruction via the humanizing method. Participants' attitudes were assessed pre and post-intervention to determine if this approach resulted in significant change.

Participants consisted of 48 students (16 men, 32 women) enrolled in two introductory psychology classes at the same university. The sample was predominately white (95%) with an average age of 20.2. The format of the class followed that of the humanizing approach described in Study 1. The survey was also a replica of that used in Study 1, with measures of stigma and demographic variables as well as questions designed to assess students' attitudes toward the class activities.

Study 2 results

As in Study 1, there was a strong correlation between participants' stigma scores for the two vignettes ($r = 0.75$, $P < 0.01$); consequently, we combined the scores to produce a total stigma score for each participant ($M = 33.77 \pm 7.73$). Total pretest stigma scores were not significantly associated with age, race, or religion, or gender.

To determine if the intervention affected stigma scores, pretest and posttest stigma scores were compared. Analyses indicated that participants had less stigma (i.e., greater comfort) following the intervention ($M = 18.72 \pm 4.14$ vs. $M = 36.52 \pm 7.85$; $t = 2.89$, $df = 45$, $P = 0.006$). Students' ratings of the poetry assignment were similar to the previous group along the three dimensions of how helpful, enjoyable, and thought provoking it was.

Discussion

We found that the traditional method of teaching psychopathology in introductory classes, with a focus on symptoms and diagnosis, did not improve participants' stigma toward mental illness. In contrast, the humanizing approach resulted in significantly greater comfort toward individuals with bipolar disorder and schizophrenia. These results are consistent with previous research and suggest that the efficacy of educational interventions may depend on the inclusion of specific components such as first-person narratives.

The current study has implications for interventions designed to reduce mental illness stigma. It echoes the emerging finding that all forms of education are not created equal. Intervention programs that include personal information about the individuals with mental illness, encourage discussion, and evoke empathy are more likely to succeed. That this can be accomplished through the use of first-person narratives is doubly auspicious, as these narratives may not only serve their audiences but can be therapeutic for their authors as well [10].

Our findings raise questions as to why the traditional method of education failed to produce any changes in stigma, when education is popularly viewed as a potential panacea for prejudice. This discrepancy between traditional education and the humanizing approach cannot be attributed to

inequalities in learning between the two groups, as exam scores in the two classes did not differ. Perhaps traditional diagnostic education is ineffective due to its emphasis on labeling at the exclusion of personal information. Educators such as Halonen [18] warn against a diagnosis-centered approach for this reason, arguing that it may lead students to use their "neophyte diagnostic skills" (p. 43) in irresponsible ways. Unwittingly, such pedagogy may leave students armed with the sharp tools of diagnosis, but not the knowledge of how to use them—a dangerous combination for stigma.

Data from labeling theory supports this notion, with studies indicating that psychiatric diagnoses can lead to increased social distance [22]. Precisely how labels operate to increase stigma is currently under investigation, but recent studies point to the role of secondary beliefs. For example, a path analysis by Angermeyer and Matschinger [2] revealed that labeling a person with schizophrenia as "mentally ill" was associated with increased beliefs of dangerousness, which in turn led to increased social distance.

A second reason that traditional diagnostic education failed to reduce stigma may be found in its heavy emphasis on biological and genetic causation. While national campaigns implore the public to adopt the attitude that "mental illness is an illness like any other" numerous studies indicate that adherence to the medical model and its implicit biological causal beliefs are actually associated with *increased* stigma [7, 26, 35]. Like labels, biological causal beliefs are associated with increased perceptions of dangerousness and therefore increased social distance [39]. Alternately, these causal beliefs may increase stigma by contributing to a schema of "otherness", wherein people with mental illnesses are viewed as a subset of the species set aside by "genetic markers" [3].

While the specific reasons for its failure remain uncertain, what is clear is that the medical model fails to reduce stigma. Yet, public education campaigns continue to fixate on educating the masses about mental illness as a "brain disease". The lack of connection between research and practice in this context is puzzling. Perhaps destigmatization programs are based on popular—but faulty—common sense beliefs, rather than on the empirical literature. Disease models are so widely embraced in the Western world that they appear nearly a part of our cultural zeitgeist. Finally, it is possible that biological models are propagated in part by influential pharmaceutical companies, who often underwrite the cost of anti-stigma campaigns[3].

Regardless of whether traditional education falls short due to its emphasis on labeling or its encouragement of faulty causal beliefs, the bottom line remains: teaching psychopathology without concern for

stigma is a missed opportunity we cannot afford. There are few places in society where we have access to such a wide and captive audience, where a non-intrusive stigma intervention could be implemented with little extra effort or cost. To wait and attempt to reach these young adults after their attitudes have solidified and they have scattered throughout the workforce would be a major undertaking, with diminishing chances of success. Given that contact appears to be a promising approach, both narrative and in-vivo forms of contact can be easily incorporated in typical college classes, to catch these individuals at a young age.

Introductory psychology courses are not only taken by large numbers of college students from all fields, but also by future mental health professionals. Research shows that stigma is not obsolete among the medical and psychiatric communities [28, 40]. One study found that doctors were the least willing of six occupational groups to support the building of a mental health center in their area [44], and that a majority of psychiatry residents endorsed stigmatizing myths such as the notion that individuals with mental illness are dangerous and unpredictable [31].

The presence of stigma in this highly educated population raises more questions as to whether education is truly effective in reducing prejudice. If stigma stems from lack of information about the causes and symptoms of mental illness—as many public education campaigns assume—the theory predicts that the most knowledgeable individuals would then be free of such prejudice. Yet, they are not, and studies have failed to detect a relationship between years of education and stigma toward mental illness: As medical and nursing students become increasingly knowledgeable about mental illness, they become no less stigmatizing [24, 31]. One longitudinal study even found an increase in stigma among students following traditional education [39].

Although education interventions have their limitations, it is important to note that contact, whether in vivo or vicarious, is also not a perfect solution to stigma. Healthcare professionals have frequent contact with persons diagnosed with mental illnesses, but because this interaction occurs in a hierarchical (provider–patient) context, research suggests it is unlikely to affect stigma. However, contact that involves a collaborative or equal-status relationship has been shown to lessen stigma in mental health professionals [21].

Our study suggests that first-person narratives may play an integral role in decreasing stigma. These findings require replication in diverse settings and populations, and incorporating other methods of assessing stigma would further strengthen results. Future studies should also seek to include follow-up measures, to determine if attitude change is sustainable. Research on stigma would also be facilitated by

---

[3]We would like to acknowledge the contribution of an anonymous reviewer for bringing this point to our attention.

more direct communication between clinical researchers in stigma and the larger social psychological study of prejudice.

Because our study is an intervention packet composed of multiple variables, we cannot determine which factor was most critical in creating attitude change—whether it was the narratives themselves, the presence of perspective-taking, or the inclusion of certain causal beliefs in the video. This study was primarily practical in nature; more focused theoretically research is needed to isolate these variables and determine which are most critical in producing attitude change.

Overall, our results suggest that the traditional method of teaching psychopathology does not address mental illness stigma, a serious concern that can be reconciled by incorporating more humanizing teaching methods. More broadly, questions about how psychopathology is taught at the undergraduate level lead to questions about mental health education in general. While diagnosis-centered teaching may be important in students' development of strong diagnostic skills, such instruction may not be the most stigma-conscious method of training clinicians. Infusing both undergraduate and graduate education with first-person perspectives and other components of successful interventions may bring us one step closer to removing stigma in a very important group. We must remember that no amount of clinical expertise can help the patient who never walks through the door, deterred by the shame of mental illness.

References

1. Adelman C (2004) The empirical curriculum: changes in postsecondary course-taking, 1972–2000. US Department of Education, Washington, DC
2. Angermeyer MC, Matschinger H (2003) The stigma of mental illness: effects of labeling on public attitudes toward people with mental disorder. Acta Psychiatr Scand 108(4):304–309
3. Angermeyer M, Matchinger H (2005) Causal beliefs and attitudes to people with schizophrenia: trend analysis based on data from two population surveys in Germany. Br J Psychiatry 186:331–334
4. Batson D, Polycarpou P, Harmon-Jones E et al (1997) Empathy and attitudes: Can feeling for a member of a stigmatized group improve feelings toward the group? J Pers Soc Psychol 72:105–118
5. Chrisler J (1992) Exploring mental illness through a poetry-writing assignment. Teach Psychol 19:173–174
6. Chrisler J, Anderson D, Fleming M et al (2000) Teaching abnormal psychology through the arts and literature. In: Ware M, Lawrence JD (eds) Handbook of demonstrations and activities in the teaching of psychology. Erlbaum Associates, Mahwah
7. Chou K, Mak K (1998) Attitudes to mental patients among Hong Kong Chinese: a trend study over two years. Int J Soc Psychiatr 44:215–224
8. Chung K, Chen E, Liu C (2001) University students' attitudes towards mental patients and psychiatric treatment. Int J Soc Psychiatr 47:63–72
9. Coodin S, Chisholm F (2001) Teaching in a new key: effects of a co-taught seminar on medical students' attitudes toward schizophrenia. Psychiatr Rehabil J 24:299–302
10. Corrigan P (Ed) (2005) On the stigma of mental illness: practical strategies for research and social change. American Psychological Association, Washington, DC
11. Corrigan P, Penn D (1999) Lessons from social psychology on discrediting psychiatric stigma. Am Psychol 54:765–776
12. Corrigan P, Penn D (2004) Lessons from social psychology on discrediting psychiatric stigma. In: Kowalski R (ed) Key readings in social psychology. Psychology Press, New York
13. Corrigan P, River P, Lundin R et al (2001) Three strategies for changing attributions about severe mental illness. Schizophr Bull 27:187–195
14. Corrigan P, Rowan D, Green A et al (2002) Challenging two mental illness stigmas: personal responsibility and dangerousness. Schizophr Bull 28:293–309
15. Desforges D, Lord C, Ramsey S et al (1991) Effects of structured cooperative contact on changing negative attitudes toward stigmatized social groups. J Pers Soc Psychol 60:531–544
16. Galinsky A, Moskowitz G (2000) Perspective-taking: decreasing stereotype expression, stereotype accessibility, and in-group favoritism. J Pers Soc Psychol 78:708–724
17. Graham J (1968) Effects of introductory and abnormal psychology courses on students' attitudes toward mental illness. Psychol Rep 22:448
18. Halonen J (2005) Abnormal psychology as liberating art and science. J Soc Clin Psychol 24:41–50
19. Hinshaw S, Cicchetti D (2000) Stigma and mental disorder: conceptions of illness, public attitudes, personal disclosure, and social policy. Dev Psychopathol 12:555–598
20. Keane M (1991) Acceptance vs. rejection: nursing students' attitudes about mental illness. Perspect Psychiatr Care 27:13–18
21. Kolodziej M, Johnson B (1996) Interpersonal contact and acceptance of persons with psychiatric disorders: a research synthesis. J Cons Clin Psychol 64:1387–1396
22. Link B, Cullen F, Frank J et al (1987) The social rejection of former mental patients: understanding why labels matter. Am J Soc 92:1461–1500
23. Link B, Struening E, Neese-Todd S et al (2001) Stigma as a barrier to recovery: the consequences of stigma for the self-esteem of people with mental illness. Psychiatr Serv 52:1621–1626
24. Llerena A, Caceres M, Penas-Lledo E (2002) Schizophrenia stigma among medical and nursing undergraduates. Eur Psychiatr 17:298–299
25. Mann C, Himelein M (2004) Factors associated with the stigmatization of persons with mental illness. Psychiatr Serv 55:185–187
26. Mehta S, Farina A (1997) Is being "sick" really better? Effect of the disease view of mental disorder on stigma. J Soc Clin Psychol 16:405–419
27. Miller B, Gentile B (1998) Introductory course content and goals. Teach Psychol 25:89–96
28. Mirabi M, Weinman M, Magnetti S et al (1985) Professional attitudes toward the chronic mentally ill. Hosp Community Psychiatry 36:404–405
29. Morrison J, Teta D (1980) Reducing students' fear of mental illness by means of seminar-induced belief change. J Clin Psychol 36:275–276
30. Morrison J, Cocozza J, Vanderwyst D (1978) Changing students' constructs of mental patients by means of educative seminars. J Clin Psychol 34:482–483
31. Packer S, Predergast P, Wasylenki D et al (1994) Psychiatric residents' attitudes toward patients with chronic mental illness. Hosp Community Psychiatry 45:1117–1121
32. Penn D, Guynan K, Daily T et al (1994) Dispelling the stigma of schizophrenia: What sort of information is best? Schizophr Bull 20:567–578
33. Perlick D, Rosenheck R, Clarkin J et al (2001) Stigma as a barrier to recovery: adverse effects of perceived stigma on social adaptation of persons diagnosed with bipolar affective disorder. Psychiatr Serv 52:1627–1632

34. Perlman B, McCann L (1999) The most frequently listed courses in the undergraduate psychology curriculum. Teach Psychol 26:177–182

35. Read J, Harre N (2001) The role of biological and genetic causal beliefs in the stigmatization of "mental patients". J Ment Health 10:223–235

36. Read J, Law A (1999) The relationship of causal beliefs and contact with users of mental health services to attitudes to the "mentally ill". Int J Soc Psychiatr 45:216–229

37. Read J, Haslam N, Sayce L, Davies E (2006) Prejudice and schizophrenia: a review of the 'mental illness is an illness like any other' approach. Acta Psychiatr Scand 114(5):303–318

38. Reinke R, Corrigan P, Leonhard C et al (2004) Examining two aspects of contact on the stigma of mental illness. J Soc Clin Psychol 23:377–389

39. Sadow D, Ryder M, Webster D (2002) Is education of health professionals encouraging stigma towards the mentally ill? J Ment Health 11:657–665

40. Sartorius N (2002) Iatrogenic stigma of mental illness. Br Med J 324:1470–1471

41. Sirey J, Bruce M, Alexopoulos G et al (2001) Stigma as a barrier to recovery: perceived stigma and patient-rated severity of illness as predictors of antidepressant drug adherence. Psychiatr Serv 52:1615–1620

42. Vogel D, Wade N, Hackler A (2007) Perceived public stigma and the willingness to seek counseling: the mediating roles of self-stigma and attitudes toward counseling. J Couns Psychol 54:40–50

43. Walker I, Read J (2002) The differential effectiveness of psychosocial and biogenic causal explanations in reducing negative attitudes toward "mental illness". Psychiatr Interpers Biol Process 65:313–325

44. Wilmouth G, Silver S, Severy L (1987) Receptivity and planned change: community attitudes and deinstitutionalization. J Appl Psychol 72:138–145