INSTRUCTIONAL DESIGN AND ASSESSMENT

An Elective Psychiatric Course to Reduce Pharmacy Students' Social Distance Toward People With Severe Mental Illness

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Submitted January 7, 2011; accepted March 7, 2011; published May 10, 2011.

Objective. To determine whether an elective course on mental health could reduce pharmacy students' social distance toward people with severe mental illness.

Design. Course activities included assigned readings, class discussions, student presentations, review of video and other media for examples of social distance, presentations by patients with mental illness, and visits to hospitalized patients in a variety of psychiatric settings.

Assessment. The Social Distance Scale (SDS) was administered at the beginning and end of the semester to students enrolled in the elective and to a comparator group of students not enrolled in the course. Pharmacy students who did not complete the elective had significantly higher SDS scores than students who completed the elective (18.7 vs. 15.6, $p < 0.001$). Students enrolled in the course had lower precourse SDS scores, were more likely than their peers to have a personal association with mental illness, and had a decrease in precourse to postcourse scores.

Conclusion. A course designed to reduce stigma towards the mentally ill can reduce pharmacy students' social distance.

Keywords: pharmacy students, mental illness, psychiatry, social distance

INTRODUCTION

The general public has long held a negative attitude toward individuals with psychiatric illness, resulting in their stigmatization.¹⁻⁸ Although healthcare professionals are expected to be more understanding and exhibit less stigmatizing attitudes towards mentally ill patients, the literature suggests otherwise. Healthcare professionals also exhibit negative attitudes towards mental illnesses such as schizophrenia, and these negative attitudes are exacerbated when mentally ill patients have been hospitalized in a secured setting.^{4,9,10} In some cases, patients may be misdiagnosed or overdiagnosed because of clinician bias.⁸

Negative student attitudes can start early and are evident during training. A study of London medical doctors and students found that more than 50% perceived patients with schizophrenia as dangerous, unpredictable, and difficult to communicate with.¹¹ A survey of Australian nursing students showed that most held negative stereotypes towards mental illness.¹² Based on reactions to case descriptions, Nigerian medical students demonstrated that they

were more likely to have negative attitudes towards patients with mental illness and to desire social distance.¹³

Social distance is "the relative willingness of one person to participate in relationships of varying degrees of intimacy with a person who has a stigmatized identity."^{14,15} Emory S. Bogardus, a social scientist, developed the hypothesis that social attitudes could be described using a survey instrument and statistical analysis.¹⁶ Although his original research focused on various ethnic and religious groups, the concept has been broadened to include other at-risk populations such as those with psychiatric illnesses.^{4,17}

Despite their varied geographic locations, pharmacy students in Australia, Belgium, Estonia, Finland, India, and Latvia exhibited similar degrees of social distance towards patients with schizophrenia.¹⁸ Increased social distance by Estonian pharmacy students towards patients previously hospitalized for symptoms of schizophrenia was associated with poorer attitudes regarding medication counseling.¹⁹ The literature is less clear on how to improve pharmacy students' social distance of patients with mental illness. A study conducted in Australia concluded that traditional methods of delivering mental health lectures and tutorials may not improve social distance of pharmacy students or pharmacy graduates toward individuals with schizophrenia and severe depression.²⁰

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The University of Maryland School of Pharmacy offers a 4-year full-time doctor of pharmacy (PharmD) program in which students enter with a minimum of 2 years of undergraduate coursework. Third-year PharmD students have the opportunity to enroll in a 2-credit didactic elective course, Perspectives of Mental Health. The purpose of this study was to evaluate whether an elective psychiatric course with outcomes designed to target stigmatization and dispel myths could reduce student social distance toward patients with severe mental illness. A secondary objective was to detect whether there were student characteristics that were more likely to be associated with social distance towards this patient population.

DESIGN

The elective was intended to provide students with an understanding of the mental health system, controversies that practicing pharmacist are likely to face, tools and techniques used in the treatment of psychiatric diseases, and the role of pharmacists in the provision of mental health care. The course learning outcomes are listed in Table 1. The learning outcomes that most specifically addressed negative attitudes and social distance included outcome 3, (evaluate the validity of commonly held notions and myths regarding mental illness and its treatment); outcome 4, (formulate and defend a position on a controversy related to mental health care); and outcome 8, (describe roles for pharmacists in the provision of mental health care services).

The course schedule, activities, and assessments are summarized in Table 2. Classroom activities were designed to force students to face their prejudices and recognize stigmatizing views. In the class session on psychiatry in

the media, students completed related readings, presented video clips to their classmates, and discussed ways in which television, film, literature, and music perpetuate myths and stigma associated with psychiatric illness and treatment. The session on the history of the psychiatric hospital was to help students understand the development of the current treatment system and to illustrate how, in some cases, current fallacies are based on previous facts.

Students had an opportunity to listen to patients with mental illness describe their journey to health and then interact with guest speakers from the National Alliance of the Mentally Ill (NAMI), and to visit with hospitalized patients in a variety of psychiatric settings, ranging from a state psychiatric hospital to an acute care ward in a private hospital. Students were required to write a short description of their hospital experience and share it with fellow classmates.

The last 20% of course sessions involved student-led discussions on controversial mental health issues. Two of the most popular controversial topics were whether attention deficit hyperactivity disorder (ADHD) is over diagnosed and treated, and whether electroconvulsive therapy (ECT) has a role in the evidence-based management of psychiatric disorders. The student-led debates allowed each classmate to practice developing arguments and drawing conclusions after being provided with a factual basis for the controversy. Two hours were allotted for each classroom or online activity. Student-led debates were completed in 45-minute sessions, with 2 presentations per week. Students were evaluated based on in-class assessments (midterm, final examination), class participation, presentations, and required written assignments. The objective criteria used for assessment were provided to students for all assignments to guide them in preparation.

EVALUATION AND ASSESSMENT

All students enrolled in Perspectives of Mental Health were asked to complete a voluntary and anonymous survey instrument about their attitudes towards the mentally ill on the first day of class and at the conclusion of the course. The survey instrument consisted of demographic information and questions from the Social Distance Scale (SDS), a 7-item tool that has good consistency and validity in assessing behavioral discrimination against those with severe mental illness.^{17,21,22} The students were asked to rank each item on a 4-point scale ranging from 1 = definitely willing to 4 = definitely not willing. Higher scores on the SDS are associated with greater social distance.

The survey was conducted for 3 consecutive years, from 2007 to 2009. To establish a comparator group, the survey was offered to all third-year students in 2007 and 2009. The coursemaster requested the survey not be given to a comparator group in 2008 due to limited administrative

Table 1. Learning Outcomes for an Elective Psychiatric Course

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- (1) Describe differences in the systems for provision of mental health care and physical health care.
  - (2) List the rights of patients seeking services in the mental health system and circumstances which may result in their curtailment.
  - (3) Evaluate the validity of commonly held notions and myths regarding mental illness and its treatment.
  - (4) Formulate and defend a position on a controversy related to mental health care.
  - (5) Recognize major classes of psychiatric symptoms and diagnosis.
  - (6) Use the Diagnostic and Statistical Manual of Mental Disorders.
  - (7) State the applicability of state and federal laws and regulations regarding mental illness and its treatment.
  - (8) Describe roles for pharmacists in the provision of mental health care services.
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Table 2. Class Schedule for Perspectives of Mental Health

Session	Topic	Activity Type	Assessment
1	History of Psychiatric Hospitals	Video, Discussion	Examination
2	Psychiatry and the Media Students post Media Clips and provide narrative Online discussion	Discussion	Media clip and narration assignment, Class participation, Examination
3	“In Our Own Voice: Living With Mental Illness” Presentation by NAMI guest speaker	Workshop	Examination
4	Admissions, Patients’ Rights and Civil Commitment Process Presentation by public defender	Lecture	Examination
5	Forensic Psychiatry Presentation by forensic psychiatrist	Lecture	Examination
6	Introduction to Mental Status Examination and the Diagnostic and Statistical Manual for Mental Disorders	Lecture	Examination
7	Pharmacist Mental Health Panel Discussion Questions emailed to coursemaster in advance.	Workshop	Question submission assignment, Examination
8	Midterm Examination	Examination	
9	Psychiatric Hospital Tour and Patient Interview	External Activity	Written assignment
10	Patient Presentations	Written Assignment, Discussion	Written assignment
11-14	Controversies in Mental Health	Student Presentation, Discussion	Presentation, Examination
15	Final Examination	Examination	

resources. To coordinate with the conclusion of the elective and to reduce the effects of other mental health coursework on the students’ responses, the survey instrument was administered immediately after the elective and before the students were taught psychiatric therapeutics or were eligible to complete psychiatric advanced pharmacy practice experiences (APPEs). Consequently, the elective served as the primary exposure to psychiatric patient care for those who had taken the course, while the comparator group did not knowingly receive any similar exposure or instruction. Extra credit was awarded for completion of the survey instrument using a tracking feature in Blackboard, but specific results were not linked to individual students. The study was reviewed and exempted by the University of Maryland Institutional Review Board.

Data from the survey instruments were coded and analyzed using SAS, Version 9.1.3 (SAS Institute, Cary, NC). Descriptive statistics were computed and reported. Pre- and posttest data from the students enrolled in the course were compared with that of their peers not enrolled in the course. Differences in demographic characteristics between students who took the course and those who did not take the course were compared using chi-square tests. Independent *t* tests were used to compare

survey responses of individual questions between the 2 groups.

The survey instrument was administered to 44 students who took the elective course between 2007 and 2009 and to 234 peers who did not take the elective. One hundred percent of the elective students who completed the course and 96% of the peers completed the survey instrument. These percentages were calculated using available course census data. There were 43 elective course students who participated in the survey on the first day of class and 44 who participated on the last day of class. A comparison of the demographic and survey data for those who had completed the course versus those who had not is given in Table 3. Significantly more students who were diagnosed with a mental illness or knew someone diagnosed with mental illness completed the elective. There were no significant differences in age or gender between the groups. Students who did not complete the elective showed significantly greater social distance on every individual question and in total mean SDS scores compared with their peers who had completed the elective ($P < 0.05$).

Table 4 summarizes SDS pre- and posttest scores for students who completed the elective between 2007 and

Table 3. Demographic Characteristics and SDS Scores of Pharmacy Students Who Did and Did Not Complete an Elective Psychiatric Course^a

Characteristics	Combined 2007 and 2009 Classes		P ^c
	Completed the Elective, ^b N (%)	Did Not Complete The Elective, ^b N (%)	
Sample size	28 (100)	234 (100)	
Age, y			0.55
≤ 25	17 (60.7)	127 (54.3)	
> 25	11 (39.3)	107 (45.7)	
Gender			1.0
Male	9 (32.1)	76 (32.5)	
Female	19 (67.9)	158 (67.5)	
Mental Illness (Had or Knew Someone with)			0.0082
Yes	20 (71.4)	102 (43.6)	
No	8 (28.6)	132 (56.4)	
Questions ^d			
Would you share a living space with someone with a severe mental illness	2.5 (0.5)	3.0 (0.7)	<0.0001
Would you work with someone who was previously hospitalized with severe mental illness	1.8 (0.7)	2.1 (0.7)	0.017
Would you have a neighbor who was previously hospitalized with severe mental illness	1.7 (0.7)	2.1 (0.7)	0.0037
Would you have someone who was previously hospitalized with severe mental illness baby-sit your child	3.0 (0.7)	3.6 (0.6)	<0.0001
Would you have (be comfortable with) one of your children marrying a person who was previously hospitalized with severe mental illness	2.3 (0.7)	2.9 (0.8)	<0.0001
Would you introduce someone who was previously hospitalized with severe mental illness to a friend as a relationship partner	2.3 (0.7)	2.7 (0.8)	0.0078
Would you recommend someone who was previously hospitalized with severe mental illness for a job	1.9 (0.7)	2.2 (0.7)	0.04
Sum of Social Distance Scale	15.6 (3.7)	18.7 (3.5)	<0.0001

Abbreviations: SDS = social distance scale

^a Fisher's exact tests were used to compare the differences of age, gender, and mental illness. Independent *t* test was used to compare means of SDS 1-7 questions separately and their sum.

^b Third-year pharmacy students who did not complete the elective course.

^c *p* < 0.05 significant.

^d Mean (SD)

2009. Because 1 of the elective students did not complete the pretest, no statistical analysis between pre- and post-test scores was conducted other than reporting mean scores for each question. While there was a trend toward less stigmatizing responses on all questions, the greatest change in SDS scores was noted for questions 1, 4, and 5 (mean scores pretest vs. posttest: 2.9 vs. 2.6, 3.3 vs. 3.0, and 2.7 vs. 2.4, respectively).

DISCUSSION

Traditional psychiatric coursework and/or general APPEs do not significantly improve social distance and attitudes of pharmacy students toward patients with mental illness.²⁰ A study of Australian students showed no difference in the extent of social distance towards those diagnosed with schizophrenia or severe depression even after the students received required psychiatric lectures

Table 4. Pharmacy Students' Results on a Social Distance Scale Before and After Completing an Elective Psychiatric Course

	2007, 2008, and 2009 Class	
	Before Course, n = 43	After Course, n = 44
For Students who took Perspectives in Mental Health		
Would you share a living space with someone with a severe mental illness	2.9 (0.5)	2.6 (0.5)
Would you work with someone who was previously hospitalized with severe mental illness	1.9 (0.7)	1.8 (0.7)
Would you have a neighbor who was previously hospitalized with severe mental illness	1.9 (0.7)	1.8 (0.7)
Would you have someone who was previously hospitalized with severe mental illness baby-sit your child	3.3 (0.8)	3.0 (0.7)
Would you have (be comfortable with) one of your children marrying a person who was previously hospitalized with severe mental illness	2.7 (0.8)	2.4 (0.6)
Would you introduce someone who was previously hospitalized with severe mental illness to a friend as a relationship partner	2.5 (0.9)	2.3 (0.7)
Would you recommend someone who was previously hospitalized with severe mental illness for a job	2.2 (0.7)	1.9 (0.6)
Sum of Social Distance Scale	17.2 (3.9)	15.8 (3.5)

and completed experiential rotations in hospital and community settings.²⁰ When our data, which assessed social distance towards the severely mentally ill, were compared with data from the Australian study, the US students who had not completed the course appeared to have similar SDS scores to their Australian peers. The post-SDS scores for students who completed the elective were lower than those of the Australian pharmacy students. There was a reduction in each question score for the US students who took the elective course in comparison to the scores for Australian students. Another study of third-year pharmacy students from Australia, Belgium, India, Finland, Estonia, and Latvia evaluated social distance towards those with schizophrenia and found a relatively similar range of mean SDS scores (18.1 to 20.9).¹⁸ The third-year PharmD students in this study who had not completed the elective demonstrated a mean SDS score of 18.7, which was consistent with the mean score of their international peers.

The results from our study suggest that the social distance of pharmacy students towards the severely mentally ill can be influenced. Coursework that incorporates personal information, dispels myths, works to improve empathy through classroom exercises and direct patient interactions, and includes discussion reduces social stigma.²³⁻²⁷ The data from this course, which used many of these techniques, seems to support these previous findings. In our course evaluations, students consistently report that the psychiatric hospital visits and patient interviews were the most enjoyable and influential component of the course.

Familiarity with someone with a mental illness is associated with less perceived dangerousness, less fear, and,

consequently, less social distance.²⁸⁻³⁰ Personal experience is a critical contributor to how much social distance a person desires when they interact with someone with mental illness. Several studies have found that individuals who have a personal connection to a patient, friend, or family member with mental illness desire less social distance and hold more positive attitudes towards mentally ill patients compared to those without such relationships.^{29,31-33} Consistent with previous findings, the students in our study who chose to take the elective showed lower social distance scores and were more likely to have been diagnosed with a mental illness, or know someone who had been diagnosed with a mental illness, than their peers.

The greatest difference in social distance was observed when students who completed the course were compared with those who had not. The data suggest that the greatest social distance was held by those students who did not choose to take the elective. In order to achieve the most widespread impact, colleges and schools of pharmacy may want to consider incorporating coursework into the required curriculum that reduces stigmatization of patients with mental illness.

There were limitations to this study. Because Perspectives of Mental Health was designed to allow for personal interaction and discussion, the class size was capped. Consequently, the number of students who took the elective was much smaller than the number who did not. In addition, the students who completed the course were less socially distant than their peers at baseline, suggesting a certain comfort level with psychiatric illness among those who enrolled in the elective. The small sample size and self-selection limited our ability to demonstrate more

robust classroom effects. In addition, the survey was voluntary and anonymous. While this encouraged students to answer questions more honestly, it also allowed for students to choose not to participate or to respond to only select questions. The course was designated as an elective and consequently offered more flexibility in enrollment deadlines. Students may have been present on the first day of class and then dropped the course later in the semester or were absent when the survey was administered but added the course thereafter. Consequently, there was a discrepancy in the number of completed posttest survey instruments when compared with pretest survey instruments. This may have further skewed our findings.

The anonymous survey also prohibited us from matching and analyzing pretest and posttest responses. Extra credit was offered as an incentive to complete the survey instrument and may have altered the results of the study. Despite these limitations, we were able to demonstrate that pharmacy students taking the Perspectives of Mental Health class had reduced social distance scores on all of the questions in the scale.

CONCLUSION

A course specifically designed to reduce social stigma towards the mentally ill resulted in improved pharmacy students' attitudes toward mentally ill patients and lower social distance scores. Further research is necessary to determine whether incorporating coursework to target stigma of patients with mental illness into the required curriculum would produce a similar or greater effects for the general student body.

ACKNOWLEDGEMENTS

The authors wish to thank Dr. Jason Noel, PharmD, BCPP, who has served as co-coursemaster for Perspectives of Mental Health for several years. We also recognize Dr. Raymond Love, PharmD, BCPP, FASHP, for contributing to the initial development of this course.

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