Positive Attitude Change toward Psychiatry in Pharmacy Students Following an Active Learning Psychopharmacology Course

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Objective: Psychiatric care in many rural communities has been demonstrated to be less adequate compared with urban environments partially because of attitudes and stigmatization issues. Educated pharmacists with professional attitudes can have a major impact in helping mental health patients receive more accurate diagnostic assessments and safe and effective treatment. This report demonstrates the effects of a specialized elective course in psychopharmacology on doctor of pharmacy students’ attitudes toward psychiatric disorders and their treatment.

Methods: Third-year pharmacy students (N = 13) completed the Attitudes toward Psychiatry-30 (ATP-30) questionnaire before and after taking an active learning, advanced psychopharmacology course.

Results: ATP-30 questionnaires indicated that the course resulted in a positive change in students’ attitudes toward psychiatric patients and treatment.

Conclusion: Considering the increasing role of rural pharmacists in the care of patients, it is suggested that colleges of pharmacy that emphasize rural practice should augment mental health related education.

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Psychiatric treatment in rural areas has been found to be less adequate than in an urban environment, with higher suicide rates, less appropriate medication use, and increased psychiatric admissions to hospitals (1–3). Longer travel times to providers have been correlated with a lower likelihood for guideline-concordant psychiatric treatment and higher use and misuse of psychiatric medications (3). The reasons for the disparity between rural and urban environments are many, and include a shortage of mental health care professionals and stigmatization issues in small communities (4). We suggest that these issues can be partially addressed by additional education for pharmacy students planning to practice in rural environments.

Pharmacists’ involvement in the care of mental health patients has benefits in feedback, adherence, provider visits, and patient satisfaction (5). However, current pharmacy school training may not be sufficient to increase students’ knowledge, comfort, and understanding when working with the mentally ill (6, 7).

The College of Pharmacy at the University of Minnesota in Duluth educates pharmacists to provide advanced pharmaceutical care in rural environments. Because attitudes toward mental health appear to be a main concern in rural communities, the present study examined the effects of an advanced psychopharmacology course utilizing active learning strategies on attitudes toward psychiatry of third-year doctoral students in pharmacy. Active learning courses were previously developed in health profession schools emphasizing rural health and were proven to increase the spirit of inquiry and to help form study habits that become the basis for lifelong self-education (8).

Driven by the desire to help alleviate the shortage of psychiatric care in rural populations (2), we developed an elective course in psychopharmacology designed to increase knowledge and understanding of major psychiatric disorders, specifically regarding the frequency, neurobiological and psychological bases, and the current and emerging
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The questionnaire is designed so that in some questions a higher number reflects a better attitude and in others a lower number reflects a better attitude. To allow for statistical comparison, all scores were converted so that a higher number represented a better attitude. After transformation, a paired t test was used to analyze the total scores of students before and after the course. Because this analysis resulted in a significant effect, each specific question was analyzed separately with the same method.

Methods

Thirteen doctor of pharmacy students in their third year of a 4-year program registered for and completed a new elective course in advanced psychopharmacology. All students had previously participated in a general pharmacology course with a psychopharmacology section (6 hours). As part of the course evaluation process, students were asked to complete an attitude questionnaire in addition to the standard course evaluation forms. Student participation in the evaluation process was voluntary, student identifiers were not included on the survey, and the instructor was not present during completion of the survey.

The course was designed as a two-credit, single semester, elective course (30 hours) and was led by a psychopharmacologist faculty member. The course was designed in line with the notion that increased student involvement and self-learning processes result in increased knowledge and possible effects on attitude. Each session (2 hours) was divided to approximately two halves, where one half was dedicated to a presentation by a student and the other half to a class discussion led by the instructor. Each student was assigned a specific topic to present, and the presentation constituted 40% of the final grade in the course. An additional 20% of the grade was assigned for participating in discussion and 40% was based on a final, take-home examination. The presentations and discussions focused on new data regarding the biological bases of the diseases and the development of hypothesis-driven, novel medications. To facilitate productive discussions, students received a list of relevant abstracts for each class and were encouraged to read them and critically evaluate one or two papers from that list.

The Attitudes toward Psychiatry-30 (ATP-30) questionnaire was used to evaluate students’ positions toward psychiatric patients and treatment for psychiatric disorders. This questionnaire includes 30 questions that can be answered on a scale of 1 to 5. The ATP 30 has been used and validated with emphasis on medical students (9). Minor adaptations were made to the questionnaire to accommodate pharmacy students. The modified ATP-30 questionnaire was completed by students before and after taking the course.

Results

Students at the end of the course had significantly better attitudes toward psychiatry (paired t test, $t = 3.89$, df = 12, $p<0.01$). Significant positive changes were shown in 7 of the 30 questions, with many other questions showing similar trends and one question showing a negative change.

Details regarding the modified questionnaire as well as course topics and specific questions are available by contacting the authors.

Discussion

In line with expectations, students developed better attitudes toward psychiatric disorders, patients afflicted with these disorders, and possible treatments. The results show a general improvement in attitudes with stronger effects on some features. The significant improvement was mostly related to the possibilities of treatment and the perception of psychiatry as an evidence-based medical science. Interestingly, a negative change was indicated in one question: “Psychopharmacotherapy is so amorphous that it cannot really be taught effectively.” This negative change may reflect the students’ challenges in presenting the subject matter or perhaps is the result of increased respect for the complexity of mental illness. Yet, the general effects of the course on attitudes were significantly positive.

The present study is preliminary by nature. It was not designed with an appropriate control group, and the sample size was small. Yet, the indicated effects of the course on students’ attitudes suggested by the results are interesting and warrant additional studies.

There is a clear need to improve psychiatric care and treatment in rural communities (2, 3). With the increasing involvement of pharmacists in the care of patients and their impact on communities in general, and rural communities in particular (10), and considering the limited instruction in mental health to pharmacy students (7), it is possible that appropriate educational efforts such as the course described in this study will be effective to support...