



Short communication

## Professional development: Students' perceptions of an immersion elective in substance abuse

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### Abstract

**Objectives:** Persons facing substance abuse and addiction are ubiquitous in all areas of pharmacy practice. Some colleges of pharmacy (COP) do not report didactic coursework in substance abuse. An off-site elective was developed to offer students an experience in immersion learning on this topic. The elective objectives were (1) to facilitate professional pharmacy student development by challenging student perceptions of people regarding addiction and substance abuse concerns and (2) to elicit input on the course structure and activities to improve entry-level pharmacist preparation. Participation in the second goal was optional.

**Methods:** Eleven pharmacy students participated. Surveys and on-site student reports were evaluated for common themes of student learning and substance abuse knowledge. This project maintained participant anonymity and was approved by the University's institutional review board.

**Results:** The most common self-reported experience was recognizing addiction as a disease. Secondly, students reported increased knowledge in the following areas: healthcare provider risk, disease prevention, and treatment options for impaired healthcare professionals. Students included personal reflections on the entire experience, assigned personal goals for service delivery, considered this education essential for adequate pharmacist preparation, self-reported changes in knowledge and understanding of substance abuse and addiction following completion of the elective, reported the experience would influence their practice as pharmacists, and opined more students should have access to this educational experience.

**Conclusion:** Pilot study data supported substance abuse education inclusion in core curricula. COPs are encouraged to use published curriculum guidelines as a road map for development.

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**Keywords:** Attitudes; Drug dependency; Pharmacy student; Professional development; Student perceptions; Substance abuse

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The Accreditation Council for Pharmacy Education (ACPE) embraces the holistic development of pharmacy students. Guideline 16.1 from the ACPE Accreditation Standards and Guidelines for the Professional Program in Pharmacy Leading to the Doctor of Pharmacy Degree (updated in 2009) instructs colleges and schools of pharmacy in this area with directives to “provide academic advising and career-pathway counseling,” “coordinate the availability of personal counseling,” and “plan and participate in activities that support the development of students as professionals.”<sup>1</sup> Initial professional development may focus

on knowledge acquisition and skill development.<sup>2</sup> The Center for the Advancement of Pharmaceutical Education (CAPE) emphasizes the need for students to recognize self-limitations.<sup>1</sup> Self-assessment has been recognized as a key component in continuing professional development for pharmacists and the application of these findings in personal and professional settings.<sup>3</sup> One area to be emphasized in the developmental transition from pharmacy student to practitioner is that of substance use. Most pharmacists, regardless of practice setting, will encounter patients with drug and/or alcohol addiction or abuse/misuse problems, particularly given the scope of the problem. In 2003, the World Health Organization released findings to help quantify the burden and reported that four of the six leading causes of living with a disability were due to neuropsychiatric disorders. Alcohol-use disorders were included in the four.<sup>4</sup> The National Epidemiologic Survey on Alcohol and Related Conditions reported substance misuse disorders prevalence was 9.35%<sup>5</sup> in the United States for a 12-month period during 2001–2002.

Inclusion of substance abuse disorders in the professional curricula for college and schools of pharmacy was surveyed by Cates and colleagues in 2007. Published results from a mailed survey instrument to the 91 colleges and schools of pharmacy in the United States indicated there was no standard time in the curriculum allocated for the topic. Responses were received from 49 colleges or schools which represents a 54% response return. Twenty-six colleges and schools (53%) considered psychiatric pharmacy a curriculum content focus although only about 25% of the institutions offered elective didactic courses in psychiatric pharmacy. In the case of substance use disorders, this topic was not even taught in clinical therapeutics courses in approximately 20% of schools, and if taught, the amount of instruction dedicated to substance use disorders averaged about 3 h.<sup>6</sup> The number of U.S.-based colleges and schools of pharmacy has increased since this information was reported. By January 2012, there were 119 U.S.-based colleges and schools of pharmacy with either full or candidate status for professional degree programs. Eight additional schools have pre-candidate status.<sup>7</sup> The extent to which these institutions will address psychiatric pharmacy, particularly substance use disorders, is not known.

The need for programs to prepare future healthcare professionals to deliver behavioral health services has been recognized by a variety of professions.<sup>8</sup> The need for high-quality educational experiences has been recognized across healthcare professions.<sup>9</sup> For example, nursing recognized professional development as part of an internalization process for professionals, in addition to building a knowledge base.<sup>10</sup> A course in substance abuse was added by one medical school. This resulted in more positive perceptions by the students of both the patients and the physician's role in the treatment of these patients, including those with high tobacco use (smoking) and over-eating.<sup>11</sup> One school of pharmacy developed a mental health elective for students in their third professional year. This elective was designed to

improve student perspectives and included counseling. A positive impact on student perspectives was reported.<sup>12</sup>

One resource available to pharmacy students and pharmacists to increase their understanding and knowledge base in the area of substance abuse is an annual week-long immersion program that focuses on substance abuse, current issues and trends in the field of substance abuse education, and prevention and treatment provided through an educational delivery format.<sup>13</sup> The pharmacy section objectives for the program were "(1) to serve as an introductory or refresher course and a networking opportunity; (2) to provide information, motivation, and guidance for pharmacists or student pharmacists who currently participate in, or wish to become involved in the planning, implementation, or strengthening of state-level and campus-level programs; (3) to help and assist pharmacists or student pharmacists whose competence to perform their responsibilities has become impaired due to alcoholism or other drug dependencies by assisting them in finding treatment, ongoing recovery, and reentry into the practice of pharmacy or their pharmacy education; and (4) to better prepare attendees to provide appropriate assistance and support to clients affected by alcoholism and other drug dependencies."<sup>13</sup>

Immersion learning has been applied to a variety of learning situations. Some of the earliest programs involved language acquisition.<sup>14</sup> Colleges and schools of pharmacy have utilized this programmatic delivery methodology as well. Loke and colleagues opined professional development was a process that extended beyond the fundamentals of basic knowledge into "learning to 'read the world' as a pharmacist." They regarded this skill as one of the foundations for professional decision making.<sup>15</sup>

To facilitate and promote professional development, the University of Oklahoma College of Pharmacy (OUCOP) offers an elective course that expands the immersion program's educational component. This is accomplished via maintaining a journal that incorporates the course learning objectives, writing a paper, and taking a final exam.

The purpose of this pilot program was to determine how an immersion program and related course requirements has an effect on student perspectives as a component of the developmental pathway to professionalism. The course developer and instructional design specialist predicted that participation in an immersion program coupled with the college elective would increase students' familiarity with substance abuse and facilitate professional development through the recognition of previously held personal beliefs. The course developer created a pilot survey to gather information on student perceptions and knowledge about the abuse/misuse of alcohol and other drugs, addiction, and treatment of those affected by drug dependencies. During this pilot study, feedback was gathered regarding the course (structure, requirements, and delivery methods), and to test the survey for reliability and usability. The data were used to revise the course in order to enhance the learning experience for future students and will be shared, via

scholarship, with other universities and faculty who may be interested in offering a similar course.

### Design

This elective is offered to students following completion of their first professional year. Electives may be taken through the third professional year in accordance with OUCOP policies. Through consultation with the instructional design specialist and pharmacy faculty peers, the elective was designed to improve student understanding and awareness of substance use and impairment in general, as well as how it applies to healthcare professionals in particular. This course offers students an opportunity to participate in a program focused on substances of abuse and help prepare them to identify healthcare professionals that may be impaired. The course used a variety of activities including maintaining a daily journal focused on the learning objectives for the sessions offered that day in the immersion program, attending 12-step meetings, and writing a paper on substance abuse and a selected medical comorbidity. A final exam based on the learning objectives for the course was included.

### Student participation

Students self-selected to participate in this elective. For this pilot study, inclusion criteria included enrollment in the OUCOP elective and meeting grade point and academic standing guidelines. Students also understood the extra expense regarding this elective. Enrollment was limited to the student:faculty ratio established by the immersion program.

A pre-course meeting was held approximately three months prior to participation in the elective. Pre-survey forms were distributed, along with the course syllabus and institution-specific waiver forms. Students were given the option of returning the surveys to the course coordinator at the end of the meeting or to the student affairs office any time before leaving for the immersion program. The students were informed about the study project and how the results of the surveys and journal content would be utilized. Students were given the opportunity to ask questions about the program, elective requirements, and logistical arrangements. Approval for this project was sought and received from the University of Oklahoma Health Sciences Center Institutional Review Board (IRB). No funding was provided by an outside source, and each enrollee voluntarily participated in the study. Anonymity was maintained throughout the study for each participant.

### Survey instrument development

The survey instrument was developed based on previous research from other surveys<sup>16</sup> and following survey construction methodologies as outlined by Hutchinson.<sup>17</sup> The survey included items based on the learning objectives for the immersion program. The survey was comprised of two

components: an inductive approach for qualitative data analysis and an ordinal scale and technique for attitude measurement. The inductive qualitative data analysis approach was selected since knowledge in the area of student perceptions has not been robustly reported. Advantages of qualitative analysis include summarizing diverse raw data, clearly linking research questions to the data, and developing an assumption about the findings in the raw data.<sup>18</sup> These data interpretations also recognize the experiences and expectations of the researcher. Category identification in this research project was structured to replicate the three main attitudinal domains of the ordinal attitude component. Coding and extraction categories were matched to the survey domains of knowledge in assessment, intervention, and care-giving relationships. The written material was accessible to the course coordinator only in accordance with the course syllabus and pre-meeting information.

A Likert scale was used to scale responses (1 = highly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = highly agree).<sup>19</sup> The same scale for responses was used for all sections. The survey was anonymous and self-administered (Appendix). The tool consisted of ten core questions and included five sections: demographic information, assessment of knowledge related to addiction, intervention knowledge, care-giving knowledge, and the personal goal for the elective. Demographic information included gender, anticipated year of graduation, age range, and previous participation in the immersion program. The knowledge section contained statements about addiction pathophysiology and chemical dependency of healthcare professionals. Understanding 12-step programs and intervention strategies for healthcare professionals were in the intervention section. The care-giving section included spirituality, humor, and personal power. The last section was the personal goal for the elective. The traditional survey format instrument is a series of statements to which a response of agreement/disagreement and the depth of the agreement/disagreement is indicated. Albaum provided information showing that models designed to measure attitude are composed of a directional component to assess whether the initial inclination is positive or negative and a strength or intensity measure of that direction.<sup>20</sup> Descriptive statistics were used to describe the basic features of the study data. Ordinal methodology was applied to the student surveys.<sup>21,22</sup> The same survey tool was used before and after participation in the immersion program. Completion of the form was anonymous. Participation was voluntary.

### Results

Eleven students attended in the immersion program. Seven of eleven students completed the voluntary anonymous pre-survey. The majority of the student respondents were in two age groups. Three students were in the 21–25 age range; three were in the 26–30 age range. One was in an older age range. Five of the seven students were male. Two

students listed year of pharmacy school graduation as 2011, and five students listed 2012.

Survey results are summarized in Table 1. In brief, the general knowledge section of the pre-survey results indicated that prior to the course most students did not feel they had adequate knowledge in the area of addiction origin and prevalence and felt that those with addictions do not try hard enough to stop. After the course, all the students indicated an improvement in their knowledge of addiction. The intervention knowledge section of the pre-survey results indicated that most students were unfamiliar with addiction treatment methodologies including pain management. The post-survey results revealed a large change in understanding of these methods for the students. In the caregiving relationship section, changes were noted in the students' perceptions of personal power and spirituality in addiction recovery. Pre-survey comments included a desire

to increase knowledge of addiction issues, including addiction of healthcare providers and using the knowledge gained to help patients in their current and future practice settings.

### Previous findings

A 1991 article in *American Pharmacy* described various participants' reactions after attending the immersion program. The author found that the vast majority of the participants thought participation in the program would have a profound impact on their lives. Additionally, the author concluded that the knowledge learned, when used in practice, "will save lives."<sup>23</sup> In 2001, a study was published documenting the results of a survey sent to selected members of the American Pharmacists Association (APhA) who had attended the same program and a sample who had not.<sup>24</sup> The survey results indicated that those who had attended the

Table 1  
Student perceptions results

Domain and survey item	Highly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Highly agree (5)	Mean
<b>Assessment of knowledge</b>						
I know the theories and pathophysiology related to the origins of addiction.		<sup>a</sup> Pre: 2	Pre: 2	Pre: 2 <sup>b</sup> Post: 2	Pre: 1 Post: 7	Pre: 3.29 Post: 4.78
I think people with alcohol/substance abuse problems do not try hard enough to stop.	Pre: 2 Post: 4	Pre: 2 Post: 4	Pre: 3	Post: 1		Pre: 2.14 Post: 1.78
I know the prevalence of chemical dependency among healthcare professionals.		Pre: 3	Pre: 2 Post: 6	Pre: 2	Post: 3	Pre: 2.86 Post: 3.67
<b>Intervention knowledge</b>						
I understand the 12 steps and 12 step programs.	Pre: 2	Pre: 3		Pre: 1 Post: 6	Pre: 1 Post: 3	Pre: 2.43 Post: 4.33
I am familiar with intervention strategies for healthcare professionals.	Pre: 2	Pre: 2	Pre: 2 Post: 1	Pre: 1 Post: 7	Post: 1	Pre: 2.29 Post: 4.00
I understand issues in relapse prevention and monitoring for healthcare professionals.	Pre: 1	Pre: 2	Pre: 3	Pre: 1 Post: 7	Post: 2	Pre: 2.71 Post: 4.22
I can make recommendations for a pain management regimen for the recovering addict.	Pre: 2	Pre: 2	Pre: 2 Post: 6	Pre: 1 Post: 2	Post: 1	Pre: 2.29 Post: 3.44
<b>Care-giving relationships</b>						
I am familiar with spirituality in recovery.		Pre: 3	Pre: 2 Post: 1	Pre: 2 Post: 4	Post: 4	Pre: 2.86 Post: 4.33
I understand the place of humor and laughter for a person's well-being.			Pre: 1	Pre: 6 Post: 3	Post: 6	Pre: 3.86 Post: 4.67
I understand how to develop positive personal power.		Pre: 3	Pre: 3 Post: 1	Pre: 1 Post: 1	Post: 7	Pre: 2.71 Post: 4.67

<sup>a</sup> N = 7.

<sup>b</sup> N = 9.

immersion program were more likely to “lecture to community groups and healthcare professionals about chemical dependency, participate in a pharmacists’ recovery program, provide patients with information about treatment centers, and counsel patients about the alcohol in over-the-counter products.” Ninety-eight percent of those who attended the program found the experience to be valuable.<sup>24</sup>

A 2009 study assessed the effectiveness of a program taught to pharmacy students that focused on taking responsibility for their health. Substance use was included. In this study, the authors created a program called “My First Patient” and added lectures to a first year pharmacy course to teach the concepts of “health beliefs, behavior modification, stress management, substance abuse, and nutrition.” Written assignments, surveys, and course evaluation assessed student learning. Students improved in their ability to identify their personal health status and attained health goals by the end of the year.<sup>25</sup> These studies demonstrate that substance abuse education for health professionals is helpful in preparing competent practitioners.

Inclusion of substance abuse curricula and pharmacy education has been addressed by the American Association of Colleges of Pharmacy (AACCP). Recognition and participation of these needs in the profession and society began as early as 1988<sup>26</sup> with the recommendation for active involvement by colleges and schools of pharmacy. Additional work from the special interest group (SIG) on substance abuse education was provided in 1999.<sup>27</sup> Most recently, a subcommittee was charged with examining how colleges and schools of pharmacy prepare students in the professional program to address the needs of persons with substance abuse disorders. These included identifying the person with an addiction and recovery support methods, focusing on public safety, recommending core curricula in the professional program, and addressing the needs of practitioners via continuing education. The committee made recommendations and provided guideline publications to facilitate implementation. Target areas were development and implementation of policies and procedures for professional students and faculty/staff with addiction issues and substance abuse education in faculty/staff development. In addition, the committee recommended addressing this topic in the following areas: the professional program, accreditation and examination standards, and continuing education.<sup>28</sup> The OUCOP curriculum works toward these recommendations with two electives. One includes the immersion program and the second is an online elective focused on psychoactive substances. Modules in the coursework for that elective address specific substances in addition to prevention and recovery. Substance abuse is also a component of the required didactic curriculum in the third professional year.

### Limitations

The authors acknowledge the limitations of this pilot study, particularly the professional pharmacy student to

faculty ratio of the immersion program. The most recent information available from the program established the pharmacy student to faculty ratio as 10:1. To enable more colleges and schools of pharmacy to participate, this ratio may change to provide greater institutional representation.

Methodological limitations include the absence of a control group, inclusion of a previous participant (not included in the results), lack of a standardized and validated survey instrument, limited sample size, and self-selection of the students participating in the survey. A pilot study format was selected to pretest the survey tool and data collection methodology. This limited generalizability.

Limitations for generalizability were understood with use of a qualitative analysis format. While recognized as a method of cost-effective and focused data collection, there are several potential methodological limitations. In this study, there was only one session. No follow-up session was planned. In addition, the session was held at the time of the elective and participant fatigue secondary to the intense nature of the program may have been present. Data were obtained from a relatively small group of respondents and not analyzed with statistical techniques. It is recognized, however, that the sample size of the study group for qualitative analysis may consist of four to ten participants.<sup>29</sup> In this pilot study, qualitative analysis was the method used to identify themes in journal entries by the students enrolled in the elective. The pre- and post-tests were not coded so it could not be determined if the students who participated in the pre-test also participated in the post-test. This limitation will be addressed with the next survey.

Because of the confidential nature of the material, setting, and interactive nature of the program offered, only the course coordinator read the journal entries. Students participating in this elective were encouraged to be frank. Confidentiality was stressed. For this reason, thematic analysis was done by the course coordinator using a rubric designed for the course. All course materials were maintained in a locked cabinet in a locked office and archived in accordance with University of Oklahoma policies and the IRB protocol approved for this survey.

What the authors feel this pilot does provide is an opportunity for colleges and schools of pharmacy to evaluate the addition of substance abuse topics in their curriculum. Consideration may be given to inclusion at more than one point, if not already done. Ideally students would have the opportunity to deliver healthcare to a variety of patient populations in a variety of settings throughout their introductory and advanced pharmacy practice experiences. The authors were unable to find recent works related to substance abuse although work evaluating students’ perceptions of the stigma of mental illness<sup>12</sup> and pharmacists’ attitudes toward mental illness, the effect of empathy training for pharmacy students,<sup>30</sup> and providing pharmaceutical care to this population have been reported.<sup>31</sup>

### Lessons learned

Students attending the immersion program self-reported that they experienced profound changes in their knowledge, attitudes and perceptions of substance abuse/misuse, and addiction issues. During the week, many of the students reported a great gap in their prior knowledge of these issues and surprise regarding the depth of knowledge they were gaining from this experience. A common theme was the recognition of the need for all pharmacy students to learn more about these issues prior to beginning their pharmacy careers in any practice setting. Students recognized the value of the immersion experience given that all pharmacists will have contact with patients affected by a variety of drug addictions, including prescription drugs. Additionally, students recognized their own risks as healthcare providers and for others and learned ways to counteract risks for addiction. Changes in the perception of addiction as a disease were evident as were attitudes toward patients and healthcare professionals with current addictions and those in recovery.

All students agreed the elective course was a valuable part of their pharmacy school program. They expressed appreciation for the opportunity to attend this program to gain another perspective on learning about addiction. However, students felt that there should be opportunities to learn more of this information as part of the core curriculum rather than an elective. The students reported that they felt this information was very important to their ability to practice effectively as a pharmacist. Excellent feedback regarding the OUCOP elective course was provided and changes to the course were instituted as a result. An example of a student recommendation included a request for more first-person accounts from students in similar age groups rather than pharmacists in long-term recovery. The students were interested in how to bring this experience back to their peers who were unable to participate due to financial constraints or family commitments. In addition to their emphasis on the topic of substance abuse as a core requirement, they wanted it included in the curriculum earlier in the professional program and repeated throughout the professional program. The students also have the opportunity to evaluate the elective as a component of the curriculum. The OUCOP includes formal course evaluations for each course and module at the end of each semester.

The importance of this survey lies in the initial evaluation of the pharmacy students' learning experience regarding alcoholism/drug addiction, increasing the students' fund of knowledge as it relates to substance abuse, and improvement in the students' abilities to incorporate this information into their future practice settings. Additionally, student feedback will be used to improve OUCOP the elective course offerings in this area of study. Training future pharmacists to provide services in a judgment-free manner would help maintain the trust pharmacists have with the

public. Preconceived attitudes regarding substance use may not be readily reported or acknowledged. This small qualitative survey offers a glimpse into the development of professionalism. While generalizability is not possible due to the small sample size, the value of this short descriptive qualitative study is additional reporting of what students think and how they experience this population.

### Future considerations for professional development

The authors recognized that attendance in a week-long immersion program is not feasible for the majority of student pharmacists. Understanding this limitation while recognizing the need for professional development in this area led to a variety of recommendations for expansion. A variety of resources are available through AACP to help colleges and schools of pharmacy develop and implement curriculum in this area. The AACP report from the special committee on substance abuse and pharmacy education acknowledged resources for each institution vary. They identified specific publications with each recommendation to provide flexibility addressing the needs and resources of each institution.<sup>28</sup>

Skills for professional development involve a combination of time to acquire them and share the knowledge plus an organizational structure with components of collaboration and cross-role participation.<sup>32</sup> The immersion program provided designated blocks of time for knowledge acquisition, networking, cross-role participation with involvement of faculty, pharmacists from a variety of settings, and psychologists/counselors. Opportunities for students to share and learn from each other were included.

Additional opportunities for professional student development may include collaborative endeavors between COPs and local treatment facilities to develop practice sites and focused learning in this area with group education and participation. Offering an introductory pharmacy practice experience (IPPE) to familiarize students with this special needs population and initiate development of students' skill set for the role of the pharmacist and patient care responsibilities may represent another learning opportunity. Addressing the needs of select patient populations via an IPPE has been done with geriatrics.<sup>33,34</sup> The learning environment and professional development can then expand to an advanced pharmacy practice experience (APPE) to further develop the students' skills providing pharmaceutical care, interacting with other healthcare professionals, and further defining the pharmacists' roles in patient care. One institution offers a research elective course with hands-on learning activities and experimental design discussions to augment team-based learning experiences.<sup>35</sup>

An interdisciplinary approach would allow current practitioners as well as students to participate. This could include development of a health sciences course open to all healthcare disciplines and instructors from a variety of

fields, such as psychology, medicine, pharmacy, and nursing, to participate and share their visions to facilitate professional development. Problem-based learning exercises in the professional pharmacy program curriculum have been used to augment student development.

### Conclusion

Students participating in the immersion program reported they increased their knowledge base by participating in the elective. In addition to knowledge acquisition, their attitudes on substance abuse and addiction changed following completion of the elective. All students reported the experience would influence their practice as pharmacists and opined more students should have access to this education. Publications available through AACP provide the foundation and guidance to expand this opportunity for professional development to more pharmacy students.

### References

1. Accreditation standards and guidelines for the professional program in pharmacy leading to the Doctor of Pharmacy degree. The Accreditation Council for Pharmacy Education, Chicago, IL. Available at: <[https://www.acpe-accredit.org/pdf/CPE\\_Policies%20\\_Procedures.pdf](https://www.acpe-accredit.org/pdf/CPE_Policies%20_Procedures.pdf)>; 2007 Accessed September 27, 2012.
2. Elman NS, Ilfelder-Kaye J, Robiner WN. Professional development: training for professionalism as a foundation for competent practice in psychology. *Prof Psychol Res Pr*. 2005;36:367.
3. Trujillo JM. Understanding who you are and how you work: the role of self-assessment. *Curr Pharm Teach Learn*. 2009;1:10–6.
4. World Health Organization. Investing in mental health. Department of Mental Health and Substance Dependence, Noncommunicable Diseases and Mental Health. World Health Organization, Geneva. Available at: <[http://www.who.int/mental\\_health/media/investing\\_mnh.pdf](http://www.who.int/mental_health/media/investing_mnh.pdf)>; 2003 Accessed September 27, 2012.
5. Grant BF, Stinson FS, Dawson DA, Chou SP, Dufour MC, Compton, W, et al. Prevalence and co-occurrence of substance use disorders and independent mood and anxiety disorders: results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Arch Gen Psychiatry*. 2004;61:807–16.
6. Cates ME, Monk-Tutor MR, Drummond SO. Mental health and psychiatric pharmacy instruction in US colleges and schools of pharmacy. *Am J Pharm Educ*. 2007;71 Article 4.
7. American Association of Colleges of Pharmacy. Academic pharmacy's vital statistics. Available at: <<http://www.aacp.org/about/Pages/Vitalstats.aspx>>. Accessed September 27, 2012.
8. Hayes SC, Bissett R, Roget, N, et al. The impact of acceptance and commitment training and multicultural training on the stigmatizing attitudes and professional burnout of substance abuse counselors. *Behav Ther*. 2004;35:821–35.
9. Rodger S, Fitzgerald C, Davila W, Millar F, Allison H. What makes a quality occupational therapy practice placement? Students' and practice educators' perspectives. *Aust Occup Therap J*. 2011;58:195–202.
10. Faulk DR, Parker FM, Morris AH. Reforming perspectives: MSN graduates' knowledge, attitudes and awareness of self-transformation. *Int J Nurs Educ Scholarsh*. 2010;7 Article 24.
11. Chappel JN, Jordan RD, Treadway BJ, Miller PR. Substance abuse attitude changes in medical students. *Am J Psychiatry*. 1977;134:379–84.
12. Gable KN, Muhlstadt KL, Celio MA. A mental health elective to improve pharmacy students' perspectives on mental illness. *Am J Pharm Educ*. 2011;75 Article 34.
13. School on alcoholism and other drug dependencies conference program. University of Utah School of Medicine. Salt Lake City; 2010.
14. Lyster R. The effect of functional-analytic teaching on aspects of French immersion students' sociolinguistic competence. *Appl Linguist*. 1994;15:263–87.
15. Loke SK, Duffull S, McDonald J, Tordoff J, Vlugter P, Winikoff M. SimPharm: authentic immersion and 'reading the world' as a pharmacist. In: *Same Places, Different Spaces Proceedings from Ascilite 2009*. Auckland, NZ; 2009.
16. Friedmann PD, McCullough D, Saitz R. Screening and intervention for illicit drug abuse: a national survey of primary care physicians and psychiatrists. *Arch Intern Med*. 2001;161:248–51.
17. Hutchison SR, editor. Survey Research. Mahwah, NJ: Lawrence Erlbaum Associates; 2004.
18. Thomas DR. A general inductive approach for qualitative data analysis. *Am J Eval*. 2006;27:237–46.
19. Likert R. A technique for the measurement of attitudes. *Arch Psychol*. 1932;22:5–55.
20. Albaum G. The Likert scale revisited: an alternate version. *J Market Res Soc*. 1997;39:331–48.
21. Göb R, McCollin C, Ramalhoto MF. Ordinal methodology in the analysis of Likert scales. *Qual Quant*. 2007;41:601–26.
22. Chen CK, Hughes J. Using ordinal regression model to analyze student satisfaction questionnaires. *IR Applications*. 2004;1:1–21.
23. Crawford NS. The road to recovery: training to help the impaired pharmacist. *Am Pharm*. 1991;NS31:33–6.
24. Brooks VG, Brock TP, Ahn J. Do training programs work? An assessment of pharmacists activities in the field of chemical dependency. *J Drug Educ*. 2001;31:153–69.
25. Maffeo C, Chase P, Brown B, Tuohy K, Kalsekar I. My first patient program to introduce first-year pharmacy students to health promotion and disease prevention. *Am J Pharm Educ*. 2009;73 Article 97.
26. Eckel FM. Chair report for the bylaws and policy development committee. *Am J Pharm Educ*. 1988;52:411–3.
27. Dole E, Baldwin J, Murawski M. American Association of Colleges of Pharmacy guidelines for the development of psychoactive substance use disorder policies for colleges of pharmacy. *Am J Pharm Educ*. 1999;63:28S–34S.
28. Jungnickel PW, DeSimone EM, Kissack, JC, et al. Report of the AACP special committee on substance abuse and pharmacy education. *Am J Pharm Educ*. 2010;74:S11.
29. Morgan D, Spanish M. Focus groups: a new tool for qualitative research. *Qual Sociol*. 1984;7:253–70.
30. Giannetti VJ. The effect of empathy training upon pharmacy student response styles. *Am J Pharm Educ*. 1986;50:261–4.
31. Cates ME, Burton AR, Woolley TW. Attitudes of pharmacists toward mental illness and providing pharmaceutical care to the mentally ill. *Ann Pharmacother*. 2005;39:1450–5.
32. Darlin profes Kapp.
33. Woel ductor 2011;

32. Darling-Hammond L, McLaughlin MW. Policies that support professional development in an era of reform. *Phi Delta Kappan*. 1995;76:597–604.
33. Woelfel JA, Boyce E, Patel RA. Geriatric care as an introductory pharmacy practice experience. *Am J Pharm Educ*. 2011;75 Article 115.
34. McGivney MS, Hall DL, Stoehr GP, Donegan TE. An introductory pharmacy practice experience providing pharmaceutical care to elderly patients. *Am J Pharm Educ*. 2011;75 Article 159.
35. Ramsauer VP. An elective course to engage pharmacy students in research activities. *Am J Pharm Educ*. 2011;75 Article 138.