

INSTRUCTIONAL DESIGN AND ASSESSMENT

A Motivational Interviewing Course for Pharmacy Students

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Objective. To create, implement, and evaluate a pharmacy course on motivational interviewing.

Design. A 3-hour elective course was created to train doctor of pharmacy (PharmD) students in brief patient-centered motivational interviewing counseling strategies that have proven effective with the types of health issues most commonly addressed in pharmacy settings. Students were assisted in developing their skills through required readings, interactive lectures, in-class demonstrations and practice sessions, out of class skills practice, one-on-one supervision provided by doctoral level clinical health psychology students, and written reflections on each class session.

Assessment. Students demonstrated significant improvement in motivational interviewing skills and a high level of motivation for and confidence in using these skills in their future practice. Students overall assessment of the course and supervision process was highly positive.

Conclusion. This patient-centered counseling skills course was feasible and produced improvements in PharmD students' counseling skills and increased their motivation and confidence to use motivational interviewing skills in their future communications with patients.

Keywords: motivational interviewing, communication, counseling, curricular development, multidisciplinary learning

Modern pharmacy practice requires pharmacists to develop effective counseling skills, use of which can lead to a variety of positive health outcomes for patients.¹⁻⁴ The Accreditation Council for Pharmacy Education (ACPE) and the American Association of Colleges of Pharmacy (AACP) Center for the Advancement of Pharmaceutical Care (CAPE) stress the importance of tailoring communication to the audience to improve patient health and wellness.^{5,6} Consistent with these goals, accreditation standards require that pharmacy students develop specific patient-centered care competencies.⁵ Specifically, students need to become proficient in: (1) providing patient care in collaboration with the patient and medical team through the application of therapeutic principles, evidence-based data, and consideration of factors that might impact therapeutic outcomes; (2) using and managing health care system resources in collaboration with the patient and medical team to promote health, appropriate medication distribution, and improve therapeutic outcomes; and (3) promoting disease prevention

and improved health in collaboration with patients, communities, at-risk populations, and the medical team. In order to meet these important competencies, practitioners will need to develop skills for effective communication at every level of patient contact.

Despite this emphasis on the development of effective patient-centered counseling skills, a review of the Web-posted curriculums of 40 randomly selected US PharmD programs revealed that less than half (n=19) had a course that focused on the development of these important skills. Of the programs that did list a communication skills course, many were offered as an elective rather than a required course. Further, 10 relied solely on undergraduate general communication courses, which often lack a specific focus on the pharmacy setting. Another opportunity for students to develop patient counseling skills is during their introductory and advanced pharmacy practice experiences (IPPEs, APPEs). However, approaches to patient counseling vary across settings and with the skills and philosophy of the preceptors. Even though each students' AAPE experience is grounded in common programmatic outcomes, their schedules vary, making it challenging to deliver the consistent and comprehensive training necessary for them to fully develop

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individual counseling skills. More importantly, APPE experiences occur at the end of a students' program and there may not be adequate time to develop competencies before graduation if they do not enter APPEs with a strong foundation in effective patient counseling. Given the emphasis on developing competencies and the observed paucity of structured opportunities to do so, well-designed courses that specifically focus on the development of brief and effective patient-centered counseling skills for the pharmacy setting are needed.

Motivational Interviewing is a style of patient-centered counseling that is brief and has demonstrated efficacy in addressing a variety of health issues (eg, medication adherence, health screenings, substance use, smoking cessation, fruit and vegetable intake, and physical exercise) that are often the focus of pharmacy consultations.⁷⁻¹⁶ Motivational interviewing has been defined as a directive, client-centered counseling style for eliciting behavior change by helping clients explore and resolve ambivalence.¹⁷ Unlike more authoritative counseling styles, motivational interviewing is a positive, empathetic, and nonconfrontational approach where patients are assisted in articulating and resolving their ambivalence about specific health behavior changes. The central tool in motivational interviewing is reflective listening which allows practitioners to empathetically guide patients to their own solutions. A wide variety of professionals have successfully been trained to use motivational interviewing effectively in research and clinical settings.¹⁸⁻¹⁹ Motivational interviewing's brief, patient-centered focus and efficacy with a wide variety of health issues make it an ideal match for many pharmacy settings (eg, in patient/outpatient hospital pharmacy, ambulatory care clinics, community pharmacy).

Motivational Interviewing as a strategy for pharmacists engaged in patient counseling has received increased attention in pharmacy education. For the past few years, the AACP has offered programming at their national meeting on how to teach motivational interviewing to students. In addition, Auburn University regularly offers motivational interviewing train-the-trainer workshops through their Motivational Interviewing Training Institute.²⁰ Finally, a presentation at the 2008 AACP meeting described a patient-centered skills course that included 14 hours of motivational interviewing instruction.²¹ Despite these examples, there is little available information on how many schools offer training in motivational interviewing or how schools are teaching this approach to their students.

This paper focuses on a unique, yet replicable, collaboration between pharmacy and psychology faculty members to develop a motivational interviewing-focused

patient-centered counseling course for PharmD students. Based on our work training other health care professionals, we hypothesized that the students in this class would demonstrate improvement in their motivational interviewing skills as well as their own personal motivation and confidence to use motivational interviewing with patients in the future.

DESIGN

This course was created to train PharmD students in brief patient-centered counseling strategies that are effective with the types of health issues most commonly addressed in pharmacy consultations. Specifically, the course focused on providing an introduction to models of health behavior change and in-depth training in motivational interviewing. The class met once a week for 3 hours, for 16 weeks and attracted faculty members and professional students from pharmacy, dental hygienics, and counseling psychology. To best fit into the existing PharmD curriculum and to allow students to simultaneously be involved in IPPE placements that would allow for access to real world pharmacy settings, this course specifically targeted third- and fourth-year students. The college has a 1:5 curriculum, so targeted students were in their last 2 years of didactic coursework prior to starting their APPEs. In order to provide students with one-on-one supervision as they learned motivational interviewing skills, doctoral students from the Clinical Health Psychology Consultation and Supervision course served as co-instructors/clinical supervisors in the motivational interviewing course. The pairing of these courses provided intensive, high-quality, individual supervision for students who were learning motivational interviewing as well as a unique consultation experience for the clinical health psychology doctoral students.

By the end of the semester, students were expected to demonstrate several competencies that reflected their comprehension, analysis, and application of course material and mastery of specific motivational interviewing skills. Course objectives are displayed in Table 1.

Content

Required Readings. Journal articles were used to introduce students to models of health behavior change and brief patient-centered counseling strategies other than motivational interviewing, and to provide an overview of the empirical support for all of the approaches presented.²²⁻²⁴ Two books were assigned to provide an in-depth description of the principles and application of motivational interviewing: *Motivational Interviewing: Preparing People for Change* and *Motivational Interviewing in Health Care: Helping Patients Change Behavior*.²⁵⁻²⁶

Table 1. Course Objectives for a Motivational Interviewing Course for Pharmacy Students

Students will be able to:
● identify and describe several models of health behavior change
● identify and describe basic Motivational Interviewing concepts and counseling skills
● demonstrate knowledge of the theoretical basis of Motivational Interviewing
● describe the nuances of using Motivational Interviewing in health care settings
● demonstrate knowledge of the ethics involved in using Motivational Interviewing with diverse populations
● demonstrate Motivational Interviewing consistent patient counseling skills via in-class role playing and one-on-one recorded counseling sessions

As the title indicates, the latter book focused on the application of motivational interviewing in health care settings and addresses many of the important nuances of using this counseling style in these challenging environments.

Design of the Course. An experiential learning pedagogical style was employed in the design and implementation of the course.²⁷ The goal of experiential learning techniques is to provide students with opportunities to directly experience the material rather than more traditional and passive lecture and test approaches.²⁸⁻³⁰ In general, this translated into the assignment of a variety of practice experiences and inactive lectures that required students to go beyond what they had read and work to integrate the material into their existing knowledge base. Students were assisted in the discovery of novel applications of the theories, methods, and research findings reviewed through course assignments that required them to put into practice what they had learned in class. Most importantly, students were asked to reflect on their experiences with the course and course material.

Because this course sought to introduce professional pharmacy students to patient-centered counseling approaches with which they were likely to be unfamiliar, the first few sessions were dedicated to establishing the theoretical and empirical basis of counseling approaches to improve health (eg, adherence, smoking cessation, diet, and exercise). Next, the course focused on providing high-quality motivational interviewing training. From this point on, each class session followed the same basic pattern: (1) a brief review of what students felt were the most meaningful aspects of the preceding session; (2) an interactive lecture using active-learning techniques to engage students (eg, posing group discussion questions that

required students to draw on course material); (3) a video-based demonstration of skills and discussion; (4) an in-class structured one-on-one or small group role-play practice of motivational interviewing skills or demonstration of principles; (5) a facilitated debriefing of role-plays and other practice experiences; (6) an individual one-on-one supervision of an out-of-class practice interview (5 supervision sessions over the course of the semester); and (7) completion of written reflection forms. Each training session focused on specific concepts/skills (Table 2), and the interactive PowerPoint lectures, video-based demonstrations, and role-play practices were carefully crafted to provide students with multiple opportunities to observe and practice new ideas and skills.

Practice Interviews. In order to facilitate the development of motivational interviewing patient-centered counseling skills, students were required to complete 6 structured out-of-class practice interviews over the course of the semester. Students were provided with an interview structure consisting of 6 questions designed to promote a motivational interviewing style of interaction (Table 3) and were responsible for recruiting their own interviewees. Students were instructed to incorporate the skills learned in class to conduct a 5- to 20-minute interview about a health behavior that the interviewee might be interested in changing. At the conclusion of the practice

Table 2. Course Topics Used in a Motivational Interviewing Course for Pharmacy Students

Week	Topic
1	Course Overview
2 & 3	Models of Health Behavior Change (eg, Traditional Advice Giving, Biomedical, Biopsychosocial, Health Beliefs, Social Cognitive, Information-Motivation-Behavior)
4	Introduction to Motivational Interviewing
5	Unsolicited Advice, motivational interviewing Spirit, Big Four General Principles, Basic Tools
6 & 7	Reflective Listening
8	Eliciting Change Talk
9	Responding to Change Talk and Dealing with Resistance
10	Rolling with Resistance and Enhancing Confidence
11	Strengthening Commitment, Giving Information and Advice
12	Negotiating a Plan and Introduction to Cognitive Behavioral Therapy
13	Adapting motivational interviewing to Your Setting
14	Pulling It All Together, Tips, Ethical and Multicultural Issues
15	Supervision, Course Debriefing Session and Course Evaluation

Table 3. Practice Interview Questions Used in a Motivational Interviewing Course for Pharmacy Students

Tell me about what you see as the pros, advantages, or what you like about continuing as you are.
What are the cons or drawbacks of continuing as you are?
What do you see as the cons or downsides of making a change?
What would be the pros of making a change?
What are the most important reasons for considering changing this behavior?
How would the things you think are most important in life be affected by this change?

interview, students were instructed to ask interviewees to provide feedback on their experience by privately completing the Health Care Climate (HCC) questionnaire³¹ and sealing it in an envelope. The HCC questionnaire is a public domain standardized evaluation of patients' perceptions of clinicians' counseling skills and was used here to provide feedback on students' counseling skills. In order to facilitate the highest quality supervision, students digitally recorded their interviews and provided a written summary of the interviewees' pros and cons for making the specific behavior change discussed.³² In addition to the sealed envelope with the HCC questionnaire, digital recording of the session, and written summary, students provided a written report answering specific questions designed to assist them in reflecting on the interview experience (Table 4).

Supervision. In addition to instructor supervision during in-class role-play exercises, students received 5 supervision sessions from a clinical health psychology doctoral student trained in motivational interviewing. Most students were assigned to their own supervisor who provided one-on-one supervision sessions throughout the semester; however, several students shared a supervisor who provided small-group supervision (no more than 3 students). Supervisors listened to students' recorded practice interviews and rated them on their patient counseling skills using a form adapted from previous research.³³ (The form is available by request from the author.) Students were rated on a 7-point Likert-type scale (1 = poor/never to 7 = excellent/always) on their use of motivational interviewing skills like expressing

empathy, using reflective listening, and eliciting change talk. During in-class supervision sessions, students received individualized feedback on their particular strengths and areas for improvement. Supervisors used a variety of techniques with students (eg, having students listen to portions of their recorded interviews and providing specific feedback, guiding students through a motivational interviewing-style discussion of their motivation and confidence to improve their counseling skills, line-by-line review of transcribed sessions to identify strengths and areas for improvement), including feedback on students' scores on the skills rating form. These ratings were also used to evaluate the overall success of the course in assisting students to develop motivational interviewing skills.

Written Reflection Forms. During the last 10 minutes of each class session, students were asked to describe and reflect on the 3 concepts that they found most important during the class period. The written reflections were reviewed and used by the instructor to compose a brief review of the preceding class session for the next class, and by the supervisors in conducting supervision sessions with students.

Approach to Grading. Evaluation of student performance in the course was heavily weighted to reflect students' engagement in structured in-class and out-of-class activities. As such, course examinations were not used; instead, the evaluation of students was based on 3 primary indicators: (1) completion of practice interviews and all associated materials (60%); (2) completion of written reflection forms (28%); and (3) class participation, including active participation in supervision sessions (12%).

Student Evaluation of the Course. Students were asked to provide feedback on the design and implementation of the course. The first section of the evaluation instrument asked students to rate specific aspect of the course on a 5-point Likert-type scale ranging from 0 = not helpful at all to 4 = extremely helpful. A section with free response questions covered the aspect(s) of the class students found most useful; what they liked/disliked about in-class exercises, out-of-class practice interviews, and the supervision sessions; what the most and least helpful facet of the class was and why; additional topics

Table 4. Interview Report Format Used in a Motivational Interviewing Course for Pharmacy Students

Did you learn anything about the individual's thoughts about changing that surprised you? Did your perspective on their behavior change at all?
To what extent does it make sense that the person had not changed their behavior yet?
How do you think the individual perceived you during the interview? What do you think influenced those perceptions?
What do you think the impact of the discussion was on the individual?

they would like to have covered; and specific suggestions for improving the course. In another section, students were asked to rate the quality of the supervision provided by the clinical health psychology doctoral students by responding to a series of questions using a 5-point Likert-type scale ranging from 0 = not at all to 4 = completely. The last section asked students to rate their level of motivation and confidence to use their motivational interviewing patient-centered counseling skills with patients in the future on a 10-point Likert-type scale ranging from 1 = not at all to 10 = extremely motivated/confident.

EVALUATION AND ASSESSMENT

Evaluation of Students' Motivational Interviewing Patient-Centered Counseling Skills

Scores on the skills rating forms were used to determine whether the course was successful in assisting students to develop motivational interviewing competencies. A Wilcoxon signed rank test ($\alpha = 0.05$) was conducted examining the median rating from the first and last practice interviews conducted by the students. The median change (2.5) was significantly different from zero ($p = 0.005$), indicating that the median rating of students' last practice interviews (median = 5.6) was significantly higher than that for their first sessions (median = 3.1). Because time constraints are a major concern in most pharmacy settings, supervisors tracked the length of all practice interviews conducted by students. The median time students spent conducting practice interviews was 10.3 minutes (range 4 - 36 minutes). We did not encourage students to keep their practice interviews brief as the purpose was to fully develop motivational interviewing skills and more practice is likely helpful in achieving that goal. Nevertheless, over the course of the semester as students developed more skills and confidence, excluding a couple of extreme outliers we saw that 50% of practice interviews were 8 minutes or less.

Students' Motivation and Confidence

Students reported a high level of motivation to use their newly developed motivational interviewing skills with patients in the future (mean = 9.0 ± 1.3 , range 7-10). Similarly, the majority of students also reported significant confidence in their ability to use their skills (mean = 8.1 ± 1 , range 6-10).

Students' Evaluation of the Course

Students' overall assessment of the course and supervision process was highly positive (Table 5). Students unanimously endorsed the usefulness of the reading materials, interactive lectures, skill demonstrations, in-class role-play exercises, and out-of-class practice interviews.

In their responses to the open-ended questions, students stated that they found the course beneficial, believed they had developed some motivational interviewing consistent skills, and enjoyed the course. They reported that the number of out-of-class interviews and supervision sessions were appropriate and the experience of participating in them was useful. Students also reported that the feedback offered during supervision was invaluable to their continued development, and they especially enjoyed seeing how they could incorporate specific techniques in their next out-of-class practice interview. Finally, students found the immediate feedback provided during in-class exercises enormously useful in building their counseling skills and confidence.

Resources Required to Conduct this Course

As conceived here, this course required the following resources: (1) a motivational interviewing trained instructor; (2) several trained student supervisors; (3) a standard classroom equipped with a networked computer station, LCD projector, DVD/VCR capabilities, and dry erase boards; (4) near-by breakout rooms or small classrooms; (5) student accessible recording devices (eg, digital recorder, tape recorder, etc.); and (6) student accessible networked course management software (eg, Blackboard).

DISCUSSION

Ensuring that PharmD students develop effective patient-centered counseling skills is central to the profession's ability to impact a variety of important health outcomes as evidenced by the increasing number of articles published that describe coursework to address this critical need.^{1,2,18,34-37} While we are pleased with the outcomes of this multi-disciplinary collaborative effort, clearly one course is not enough to ensure that students are proficient in providing effective motivational interviewing-styled, patient-centered counseling. Additional supervised experience and exposure to good models like well trained PharmD faculty members will be necessary to ensure that these competencies are fully developed. However, even if students never fully develop their patient-centered counseling skills, exposure to a course like the one described here will provide students with important insight into the patient perspective.

Based on the objective data and our subjective experience of developing and implementing the course, we feel that the class was a success. Nevertheless, there were aspects that could be improved upon in future courses. For example, students used their friends for the out-of-class practice interviews and this was sometimes a problem because as one student commented, "...they didn't always take it as seriously as they should have." Restricting

Table 5. Pharmacy Students' Evaluation of a Motivational Interviewing Course, N = 12

Course Component	Percent of Students Choosing These Responses
Course (combined response of "very helpful/good" and "extremely helpful/good")	
Readings	
Interviewing: Preparing People for Change	100
Motivational Interviewing in Health Care: Helping Patients Change Behavior	100
Instructor led discussion of course material	100
Taped demonstrations of counseling techniques	100
Practice	
Structured in-class role play exercises	100
Outside class practice Interviews	100
Supervision (combined responses of "mostly" and "completely")	
Did your supervisor show flexibility?	87.5
How approachable was your supervisor?	100
Did your supervisor establish good rapport with you?	100
Did you feel your supervisor understood your needs?	100
Did your supervisor meet your needs?	100
Did you feel your supervisor understood your goals?	100
Did your supervisor help you to reach your goals?	100
Did your supervisor identify weaknesses or techniques that were challenging for you?	87.5
Did your supervisor provide feedback in a respectful manner?	100
Did your supervisor help you to develop confidence in your Motivational Interviewing abilities?	87.5
Did your supervisor use supervision time efficiently?	100
Did supervision help you to improve your Motivational Interviewing skills?	100
Do you think that you contributed to supervision in such a way that made sure that your needs/goals were known?	87.5
Do you think that you contributed to supervision in such a way that made sure that your needs/goals were met?	75
Do you feel like you used courses resources to facilitate your progress?	87.5

students from interviewing friends and family members will provide a more realistic experience, as pharmacists typically interact with patients in the community who they do not know personally. Students could still recruit friends and family members to participate, but then exchange volunteers with fellow classmates. Another suggestion was to use undergraduate student research participants from standard pools available in psychology departments at most universities.

Although the students who received group supervision reported benefitting from the experience of observing feedback delivered to fellow classmates, some expressed a desire to also have private meetings with their supervisor as well. A balance of group and individual supervision, which offer different but important channels for students to receive expert feedback, may be a realistic way to address this concern. Another structural change that would improve this course is to conduct supervision sessions in private interview rooms and use portable computers to listen to the record practice sessions. While space is always scarce, providing supervision in a crowded

classroom is not conducive to the types of honest exchanges about necessary to fully develop counseling skills. Students were encouraged to listen to their recorded interviews before supervision, but they clearly would have benefitted from listening to selected portions of their interviews while receiving feedback during supervision.

This was an elective course, so students self-selected. Less motivated students may not have done as well or enjoyed the course as much. Making counseling courses mandatory for all students would improve the dissemination of these important skills; however, conducting a class like this with 100+ students is probably not feasible. Alternatives include adding counseling skills training in several courses and in pharmacy practice experiences with trained preceptors or offering training as a required portion of pharmacy practice laboratories.

The motivational interviewing model we present was clearly effective; however, it is not the only viable approach as there are other counseling styles (eg, brief cognitive behavioral treatment³⁸) that can be effective. Nevertheless, we see motivational interviewing as a superior option

because it has demonstrated efficacy as a brief intervention (less than 5 minutes)¹¹⁻¹⁴, can be delivered by a variety of health care practitioners, and focuses on the use of reflective listening which allows counselors to assist patients from a wide variety of diverse backgrounds.²⁴

What we report here is likely replicable in many settings; however, it requires the provision of high-quality supervision. Trained clinical health psychology doctoral students served as supervisors for the PharmD students and were in turn supervised by an expert preceptor. This type of multidisciplinary collaboration is advantageous to all parties as the PharmD students received high-quality supervision and the doctoral students gained practice consulting and supervising other health professionals. A win-win situation for all and a good example of the benefits of multidisciplinary collaboration that will produce better pharmacists and better clinical health psychologists. However, not all settings will have these resources available. In these instances, programs can draw on internal expertise as over time senior PharmD students will develop competencies and be able to serve as supervisors for beginning students. This would simultaneously provide a pool of trained supervisors and on-going supervised training for more advanced PharmD students who wish to fully develop their skills.

Any institution that wishes to ensure that their students develop patient-centered counseling skills will need to diffuse training across their curriculum. To be sure, this will require a focused and strategic effort, but it is feasible. For example, institutions that wish to initiate such efforts should start by evaluating their existing resources and needs. Next, they should identify resources and develop strategic collaborative relationships with other divisions (eg, departments of psychology, counseling psychology, nursing, social work, etc) that have the necessary expertise. (A word of caution here, not all counseling styles are appropriate for the pharmacy setting. It is important to partner with others who have expertise in empirically supported approaches for the types of health behaviors targeted in the pharmacy setting.) Next they might provide training for their own faculty members to facilitate buy-in and so that skills can be disseminated in a variety of courses and settings. Qualified trainers can be found online at <http://motivationalinterview.org/training/trainers.html>. Finally, it might also be worthwhile to employ the services of an experienced consultant.

SUMMARY

A 3-hour elective course to train PharmD students in conducting patient-centered counseling regarding health issues using motivational interviewing skills was created and implemented. Pharmacy students' counseling skills

significantly improved in as few as 6 practice sessions through brief practice patient encounters. Students also reported being highly motivated and confident in their ability to use their skills with patients in the future. This model is a useful example of how to harness the available resources of one university through a strategic multidisciplinary collaboration to maximize the impact on students.

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