

## INSTRUCTIONAL DESIGN AND ASSESSMENT

### Early Introduction to Professional and Ethical Dilemmas in a Pharmaceutical Care Laboratory Course

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**Objective.** To study the effects of an early professional development series in a pharmaceutical care laboratory (PCL) course on first-year pharmacy students' perceptions of the importance of professional attitudes and action.

**Design.** Three hundred thirty-four first-year students enrolled in a PCL course participated in a new required learning activity centered on development of professional attitudes and behaviors. Students discussed situational dilemmas in pharmacy practice in small groups, highlighting application of the Oath of a Pharmacist and the Pharmacists' Code of Ethics.

**Assessment.** Students completed an optional questionnaire at the beginning and end of the semester to assess change in their attitudes and behaviors related to professionalism in pharmacy practice.

**Conclusion.** While students entered their training with a strong appreciation for professionalism, they felt more confident in applying the Oath of a Pharmacist and the Pharmacists Code of Ethics to dilemmas in practice following the new learning activity.

**Keywords:** professionalism, pharmaceutical care lab, professional ethics

## INTRODUCTION

Student professionalism in pharmacy is documented in the literature, including its value, challenges, and strategies to foster professional attitudes and behaviors.<sup>1-5</sup> Colleges and schools of pharmacy are responsible for cultivating behaviors related to professionalism as defined in the educational standards from the Accreditation Council for Pharmacy Education (ACPE) and the Center for the Advancement of Pharmacy Education (CAPE).<sup>6,7</sup> Thus, while the importance of instilling professional attitudes and behaviors in students is evident, published strategies and efforts in pharmacy curricula remain scarce.

The White Paper on Pharmacy Student Professionalism, authored by a task force from the American Pharmaceutical Association Academy of Students of Pharmacy (APhA-ASP) and the American Association of Colleges of Pharmacy Council of Deans (AACP-COD), provides a foundation for the definition of professionalism and school-wide strategies to develop professional behaviors and attitudes.<sup>3</sup> A national survey of schools of pharmacy collected implementation efforts as described in the White Paper on Pharmacy Student Professionalism across admissions, recruitment, educational

programs, and practice.<sup>8</sup> The majority of responding schools' efforts were limited to hosting a White Coat Ceremony, distributing the Oath of a Pharmacist, and involving students in professional organizations. These results indicate that a much broader, school-wide effort is still needed to enhance professional development.<sup>8</sup>

Pharmacy is not alone in facing the challenges of teaching professionalism. The literature of other health disciplines is extensive, if mostly theoretical.<sup>9-13</sup> The challenges in medical education stem from the varied definitions of professionalism and lack of a theoretical model on which to base teaching strategies.<sup>14</sup> Defining professionalism and providing recommendations for the medical curriculum have been widely published.<sup>9,10,13,15</sup> There is also interest in the effectiveness of "hidden curriculum," where professionalism is conveyed through behavior observation.<sup>16,17</sup> Cohen reported most schools provide some component of professionalism such as small group seminars or discussions, courses in the history of medicine, medical ethics, and community service activities.<sup>10</sup>

However, there is not one standardized approach, and published strategies implemented in the medical curricula are uncommon. Michigan State University College of Human Medicine described varying components of ethics and professionalism within their curriculum that included: ethics and health policy, a mentoring

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program, elective offerings, and structured patient care experiences followed by discussion.<sup>18</sup> An innovative strategy within a professionalism course at the Warren Alpert Medical School of Brown University used structured reflective writing assignments on course topics and individualized feedback.<sup>19</sup> Finally, a national demonstration project with 33 medical schools found that a community-based professionalism curriculum using service-learning pedagogy was a successful approach.<sup>20</sup>

Despite theoretical concepts and recommendations for didactic instruction, Salinas-Miranda et al suggested that role modeling was the foundation of learning professionalism.<sup>21</sup> Their study participants, who were medical students and residents, indicated a disconnect between professional values taught early in their education and experiences in clinical training. The authors concluded more formal teaching regarding challenges in clinical settings and providing feedback on professional behavior are needed.<sup>21</sup>

An interdisciplinary approach to teaching professionalism concepts also has been reported. Students from 8 health care disciplines, including pharmacy and nursing, participated in a half-day orientation and a 2-hour field experience in a different discipline than their chosen study. The authors found the project increased students' awareness of professionalism and helped increase understanding of the various roles of the health care team.<sup>22</sup>

The literature landscape of professionalism within pharmacy is extensive. The most widely published topics include the relevance and importance of professionalism, professionalism in experiential education, and the display of professional attitudes through social media and during clinical practice experiences.<sup>23-31</sup>

Conversely, studies supporting efforts in the didactic curriculum are limited to 3 studies. A cross-sectional study at the University of Georgia surveyed first-year through fourth-year pharmacy students to assess if professional behaviors within the school aligned with the school's professionalism curricular competency statement. The survey used a 5-point Likert scale to indicate level of agreement with 42 survey items. Students believed there was overall agreement between the competency statement and behaviors exhibited by pharmacy professionals.<sup>32</sup>

An innovative approach at McWhorter School of Pharmacy evaluated raising awareness of professionalism prior to beginning the pharmacy curriculum.<sup>33</sup> Students read classic short stories and essays prior to orientation and then discussed the readings in small groups during orientation. Students indicated they were more aware of the importance of professionalism through a survey

developed by the investigators.<sup>33</sup> Finally, team-based learning in a pharmacokinetics course was found to increase professional attitudes. Groups of 6 students worked together on weekly assessments and on patient case questions. Students were surveyed before and after the course on professional attitudes. Results showed a significant increase in overall professionalism score and altruism, honesty, and duty.<sup>34</sup> These studies begin to provide evidentiary support that professionalism should be emphasized in the didactic curriculum. Combining these concepts to include early and frequent professionalism activities in the curriculum could be a more impactful approach.

Professionalism may increase throughout the pharmacy curriculum,<sup>35</sup> which would support earlier publications alluding to the cultivation of professionalism as multifactorial. However, professional development remains an important concern among pharmacy educators, and few studies exist on cultivating these attitudes and behaviors in pharmacy curricula. Furthermore, efforts reported did not incorporate an early and frequent approach to address professional issues as recommended in the White Paper on Pharmacy Student Professionalism.<sup>3</sup> Therefore, consistent with ACPE and CAPE charges to provide a culture that promotes professional behavior, a professional development series was implemented and assessed in a pharmaceutical care laboratory (PCL) course at our institution.<sup>6,7</sup> The study was conducted over 2 semester offerings of the course to assess whether this new method of approaching professionalism affected students' perceived level of professionalism and confidence in resolving situational and ethical dilemmas in future pharmacy practice.

## DESIGN

Study participants included first-year PharmD candidates enrolled in the pharmaceutical care laboratory I course in fall 2012 and fall 2013 on the main and satellite campuses. The course is a 5-semester continuum class that meets in small groups (8 students) once weekly and closely aligns with content in concurrent didactic courses. Students are assigned to one of 18 laboratory groups, and the groups are divided into 3 sections, with 6 groups meeting concurrently in each section. The groups are led by third-professional year (PY3) teaching assistants (TAs), who are trained and supervised by the course coordinator.

All students enrolled in the course participated in the new learning activity designed to develop professional behaviors and demonstrate their application in pharmacy practice. It was anticipated that the new professional development series would do the following: provide a forum

for students to openly discuss professional controversies; develop students' personal professional standards; and prepare students to effectively apply the Oath of a Pharmacist and the Code of Ethics for Pharmacists to their experiential education and future pharmacy practice.<sup>36,37</sup>

On the first day of class, students were notified about the professional development research project and were asked to consider consenting and completing an electronic pre-exercise questionnaire during the first few minutes of class. Students then were introduced to professional expectations of pharmacists and the oath and code during a required 30-minute large group discussion. Students on both campuses participated together via video-teleconference. Electronic copies of the oath and code were made available to students on the course learning management system. Students were instructed to review these documents prior to the first small group laboratory in preparation for the learning activity.

The learning activity was designed to present 8 ethical scenarios over the course of the semester (2 per week). Students would individually reflect on the situation and participate in a small group discussion. All groups discussed the same scenarios, regardless of when their group met for the laboratory. The professional development series was dispersed throughout the

semester (weeks 3, 6, 7, and 8), according to available time in the course. At the beginning of the activity, students were given hard copies of the week's scenarios and given 5 minutes for personal reflection. They recorded their initial responses to the scenarios in the space below each scenario. Students were given instructions to include how the oath and code applied to the scenario and what courses of action might be taken. After personal reflection time, TAs led a 25-minute discussion connecting the oath and code to potential courses of action.

Scenarios presented either an ethical or situational dilemma and were based on current dilemmas in pharmacy practice spanning hospital, community, and social settings. Scenarios were designed as introductory topics to be further developed in a required pharmacy law and ethics course in the third professional year. Faculty members from laboratory, law and ethics, and experiential education courses reviewed scenarios prior to implementation. Examples of scenario topics and a brief description of each can be found in Table 1.

At the end of the semester, students completed a final self-reflection assignment, which included a written response to a new scenario or one of their choice. In their response, students were instructed to design their own plan for professional action and behavior. After completion of the final assignment, students completed

Table 1. Summary of Scenarios in the Early Professional Development Series

<b>Title</b>	<b>Brief Description</b>	<b>Intended Ethical or Situational Dilemma</b>
I Refuse	Patient enters pharmacy at closing time requesting Plan B.	Conscience clause and pharmacist's right to refuse to fill medication
Elevator Mishap	Pharmacy student venting frustrations regarding an attending physician in a hospital elevator. Student realizes afterward another member of the rounding team was also present on the elevator.	Awareness of surroundings, effect of negative venting and ways to amend unprofessional behavior
Pediatric OTC	Mother requests nonprescription product for child less than 2 years old.	Balancing patients' need and legal obligations
Pharmacy – It's a Team Sport	Patient complains to you about another pharmacist who works at the same store.	Acknowledging patients' concerns while upholding respect for colleagues and other health professionals
Belligerent Patient	Patient is blatantly angry and causing a scene because his prescription was not ready.	Responding in difficult situations
Medication Access	A patient is unable to afford an expensive medication with no alternatives.	Balancing patients' need and legal obligations
Mail Order Pharmacy	Independent pharmacy owner losing business to mail order.	Meeting the needs of patients while embracing changes in health care and business
Off-duty Social Situations	Attending a social function with alcohol and dancing with both faculty members and students.	Defining the line between work and play

a postintervention questionnaire. Then, reflections were reviewed by TAs and feedback was provided to students on their professional development during a live individual student-TA evaluation session at the end of the course.

Third-year pharmacy students were employed as TAs in the course and were the facilitators for the small group discussions. Given that the TAs were not practicing pharmacists and had limited personal experience with handling similar scenarios, it was imperative for the course coordinator to provide thorough training prior to the laboratory activities. During an orientation to the professional development series, the course coordinator reviewed the oath and the code, including some basic concepts found in the documents (eg, empathy, autonomy). TAs also were briefed on the purpose of the module and expectations for student behavior during the discussions.

Prior to the learning activities in weeks 3, 6, 7, and 8, TAs participated in a meeting that focused on the specific scenarios for the week. TAs participated in a discussion, led by the course coordinator, which allowed for dialogue about the scenarios and time to share examples from theirs and the course coordinator's experiences. The TAs were given a discussion guide (Appendix A) that listed several example courses of action and how the oath and/or code might guide a practitioner to choose each action. The examples represented varying levels of professionalism, with some answers potentially better than others.

Because of the nature of the discussion, many of the scenarios did not have one "best" or "right" course of action. Teaching assistants were instructed not to force the group to decide on a "right" answer, but instead to elaborate on potential courses of action and cases where they may or may not be appropriate. It was permissible for students not to agree on the best approach to handling the scenario. In fact, uncovering different approaches was meant to allow students to cultivate and share their attitudes and beliefs. The TA discussion guide also provided questions to stimulate discussion about the scenario.

## **EVALUATION AND ASSESSMENT**

Efficacy of the new professional development series was assessed using an optional 19-item pre/postintervention questionnaire. The questionnaire (Appendix B) was developed based on a previously published professionalism tool developed by Chisholm.<sup>38</sup> Of the 18 survey items from the original survey, 13 were used in the questionnaire, and responses were modified from agree/disagree to level of importance (important, moderately important, extremely important). The questionnaire collected student responses to professional dilemmas, value of the oath and the code, and behavioral expectations of profes-

sionals. Additionally, the preintervention questionnaire gathered demographic, education, and work experience data. Development of the questionnaire included soliciting feedback from 4 faculty members and consulting staff on survey methodology at the institution.

While participation in the professional development series was a course requirement, completion of the study questionnaires was optional. The questionnaires were administered electronically via Qualtrics (Qualtrics Labs, Inc., Provo, UT) during class time, and students who agreed to participate acknowledged their consent in the first survey item. Students' grades were not affected by their decision to participate or not participate in the study, and investigators and course coordinators were blinded to student participation lists. Questionnaire data were collected and analyzed using descriptive statistics and *t* tests. The study was approved by the school's institutional review board.

During the fall 2012 and fall 2013 semesters, 334 students who enrolled in the course completed the new professional development series (278 on main campus, 56 on satellite campus). The preintervention questionnaire was completed by 216 students (65%), and 234 students (70 %) completed the postintervention questionnaire. Based on the preintervention questionnaire data, the majority of respondents (79%) reported an age of 18-25 years, with 14% stating they were 26-30 years, and 7% of respondents stating they were 31 years or older. Additionally, 39% of respondents reported previous full-time work experience, designated as 40 hours per week or more and not a temporary position (eg, summer or semester break work). Full-time work reported on the questionnaire included pharmacy and nonpharmacy related work. With regard to educational background, the majority of respondents (70%) had completed a bachelor's degree, 23% had completed undergraduate prerequisites but not a degree, and 6% had earned a master's degree. Sixty-two percent of respondents were female.

Respondents entered the course with a positive perception of their professional ideals, as evidenced by their responses to the preintervention questionnaire (Tables 2 and 3). More than 92% of respondents strongly agreed that their actions as future pharmacists affected how the profession was viewed by patients and other health care providers (Table 2). Additionally, 82% strongly agreed they were respectful of individuals who had backgrounds different than their own (Table 2). Only 51% of respondents strongly agreed they were diplomatic when expressing ideas and opinions, and this response only increased to 54% after the intervention (Table 2).

More than 90% of respondents reported characteristics such as attending work daily, producing quality work,

Table 2. Assessment of Professionalism in Pharmacy Practice – Questionnaire Results (Respondents: Pre, n=216; Post, n=234)

Questionnaire Item	% Strongly Disagree (1)		% Somewhat Disagree (2)		% Somewhat Agree (3)		% Strongly Agree (4)		Mean Response		p value
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	
I am aware of ethical dilemmas that arise in pharmacy practice.	0	3	4	1	35	24	43	72	3.4	3.7	<0.05
I feel confident in my ability to handle ethical dilemmas that will arise in my future pharmacy practice.	0	2	8	4	62	53	30	42	3.2	3.3	<0.05
I know how to apply the Oath of a Pharmacist to resolve dilemmas in pharmacy practice.	4	2	24	3	54	31	19	65	2.9	3.6	<0.05
I know how to apply the Pharmacists Code of Ethics to resolve dilemmas in pharmacy practice.	3	2	26	3	52	32	19	64	2.9	3.6	<0.05
My actions as a future pharmacist impact how patients view the profession of pharmacy.	0	3	1	<1	7	4	93	93	3.9	3.9	0.31
My actions as a future pharmacist impact how the profession of pharmacy is viewed by other health care providers.	0	3	<1	<1	8	5	91	92	3.9	3.9	0.32
I am diplomatic when expressing ideas and opinions.	<1	2	3	2	46	42	51	54	3.5	3.5	0.85
I am respectful of individuals who have different backgrounds than mine.	0	3	0	1	18	17	82	80	3.8	3.7	0.09

Individual items are on a scale of 1 through 4, with 1 being strongly disagree, and 4 being strongly agree  
 p values were calculated using a *t* test to compare changes in pre- and postintervention questionnaire items

following through with responsibilities, and treating all patients with respect were very important for them to uphold in their profession as a future pharmacist (Table 3). Students ranked the following as less important professional attributes: expecting nothing in return when helping someone, exceeding the expectation of others, and using

appropriate names and titles. While below 90% on the preintervention questionnaire, only responses to “not expecting anything in return when helping someone” improved on the postintervention questionnaire (Table 3).

Perceived application of professional ideals to pharmacy practice improved after participation in the

Table 3. Level of Importance of Professional Attributes – Pre/Post Intervention Questionnaire Results

Attribute	Unimportant, %		Moderately Important, %		Very Important, %		p value
	Pre	Post	Pre	Post	Pre	Post	
Attending class/clerkship/work daily.	0	0	4	6	96	94	0.35
Not expecting anything in return when helping someone.	2	<1	30	23	69	77	<0.05
If arriving late, contacting the appropriate individual at the earliest possible time to inform them.	0	0	8	6	92	94	0.43
Exceeding the expectation of others.	<1	<1	22	23	78	77	0.84
Producing quality work.	0	0	<1	<1	100	100	0.95
Completing assignments.	0	0	2.3	3.4	99	97	0.48
Following through with responsibilities.	0	0	1	<1	99	100	0.52
Committing to helping others.	0	0	10	4	90	95	<0.05
Accepting constructive criticism.	0	0	12	13	88	87	0.59
Treating all patients with the same respect, regardless of perceived social standing or ability to pay.	0	0	3	3	97	97	0.89
Using appropriate names and titles.	1	2	24	24	75	74	0.91

P values were calculated using a *t* test to compare changes in pre- and postintervention questionnaire items

professional development series. Significantly more respondents strongly agreed after participation they were aware of ethical dilemmas that arise in pharmacy practice (72% vs 43%,  $p < 0.05$ , Table 2). Forty-two percent strongly agreed they were confident in their ability to handle the dilemmas after the course, compared with 30% before ( $p = 0.05$ , Table 2). Additionally, significantly more respondents strongly agreed they knew how to apply the oath (65% vs 19%,  $p < 0.05$ ) and the code (64% vs 19%,  $p < 0.05$ ) after the professional development series (Table 2).

## DISCUSSION

Schools of pharmacy historically have relied on ceremonies and involvement in student organizations to promote professional behavior. These approaches, while still important, place considerable responsibility on the student to recognize and evaluate their professional development. Previous studies showed improvement in professional awareness and professional characteristics through orientation discussions and team-based learning activities. Our study builds upon this knowledge by providing an early and frequent structured activity to engage students in application of pharmacy practice standards and participation in a rich discussion with their peers.

Throughout the professional development series, students were encouraged to share their perspectives, with the goal of cultivating personal professional standards. A larger aim was increasing student awareness of ethical or situational dilemmas early in their development to set the stage for how to manage such dilemmas during practice experiences and future practice. Overall, the results showed students perceived themselves as having a high level of professionalism upon entering the program, as more than 90% of students found 7 of the 11 professionalism traits to be very important (Table 3).

This may be because of a high level of maturity based on previous work experience and completion of a bachelor's degree prior to matriculation. Of interest, only 68-77% of students ranked the characteristics of exceeding the expectation of others, using appropriate names and titles, and not expecting anything in return when helping others as very important, and only the response to not expecting anything in return when helping someone significantly improved from pre- to postquestionnaire. These may be areas of professional development to target for future activities, as the series did not appear to foster development of these attributes.

The professional development series allowed for successful achievement of applying the oath and the code to practice and to provide a forum for students to openly discuss professional dilemmas. Despite providing open discussion opportunities, it was surprising that more

students did not strongly agree to expressing ideas diplomatically and respecting individuals' backgrounds (Table 2). This may be a result of using PY3 TAs to guide discussions. While TAs were coached each week on the exercises, pharmacy faculty members did not have direct influence over each small group. The investigators observed several of the groups during the semester, and it was noted that some TAs over-directed the discussion, minimizing student participation. Additionally, since the course is the first small group experience in the curriculum, the development of diplomatic expression of ideas in a group setting may have been limited.

One major limitation of the study is that professional development was not influenced solely by the PCL course. Students learned about the importance of professionalism during orientation prior to the first day of class. Additionally, many students were involved in student organizations and receive mentoring from faculty members, which contributes to their development of professional attributes outside of the didactic curriculum. This study was not designed to measure the professional development that takes place outside of the PCL course.

Another limitation is that professionalism was self-assessed. To support students' opinions of their professionalism, it would have been beneficial to include an observation by a faculty member or TA. A third limitation of the study is that pre- and postintervention data were not matched, allowing only for measurement of changes in self-reported professionalism on a global scale and not at the level of the individual student.

The professional development series will continue to be offered in the course, as it has met all 3 aims of the project. To better address the limitations, new scenarios will be developed to address the 3 areas where students self-assessed at lower levels: use of appropriate names and titles, exceeding the expectation of others, and not expecting anything in return. More focused training will be provided to TAs on how to lead an open discussion or forum to allow for more exchange of ideas within the groups. This should help students build confidence in their ability to be diplomatic when expressing their ideas and to be respectful of individuals who have backgrounds different than their own. Lastly, TA assessment of students' professionalism will be collected and correlated to students' self-assessment to determine if students accurately measure their professionalism.

## SUMMARY

An innovative professional development series was designed to provide an early, frequent, and structured activity to engage students in application of pharmacy practice standards. Application of professional ideals to

pharmacy practice improved after discussion of pharmacy dilemmas in the context of the Oath of a Pharmacist and the Pharmacists Code of Ethics. While students perceived themselves as possessing a high level of professionalism upon entering the program, students benefited from the early introduction to professional and ethical dilemmas in the first-year pharmaceutical care laboratory course.

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## Appendix A. Example Scenario and Teaching Assistant Discussion Guide

### **Belligerent Patient**

**Week 8**

**You are a pharmacist at a busy community pharmacy and have a PY4 student on rotation with you. A patient arrives to pick up their prescription, but it is not ready yet. The patient becomes very angry and creates a scene by raising his voice. How do you respond to the patient? How do you respond to the student as a teaching opportunity?**

#### **TA Guided Discussion Questions**

How can you use the Oath of a Pharmacist and the Code of Ethics for Pharmacists to guide your response?

Oath of a Pharmacist

- I will hold myself and my colleagues to the highest principles of our profession's moral, ethical, and legal conduct.
- I will utilize my knowledge, skills, experiences, and values to prepare the next generation of pharmacists.

Code of Ethics for a Pharmacist

- A pharmacist respects the covenantal relationship between the patient and pharmacist.
- A pharmacist promotes the good of every patient in a caring, compassionate, and confidential manner
- A pharmacist respects the autonomy and dignity of each patient.

How would your response change, if at all, if the reason for the delay was your/staff fault or if the situation was out of your control? (If there is disagreement or a variety of answers from group (or if one person has not offered an opinion), directly ask one student how their classmates' responses made them feel – does it respectfully reflect how they want to be perceived?)

What does it matter how one pharmacist will handle the situation? How does that affect you?

Potential Next Steps (varying levels of professionalism are represented)

- Move his prescription to the front of the queue and work as quickly as possible to get the patient's prescription ready and get him out of the store
- Explain to the patient the process of the pharmacy and how it isn't always feasible to have all the prescriptions ready at the same time
- Retort back all of the challenges in a busy pharmacy
- Apologize for the delay and assure the patient of your diligence to make sure his prescription is filled safely and appropriately

## Appendix B. Professionalism Questionnaire for Student Pharmacists

For the following items, choose whether you strongly disagree, somewhat disagree, somewhat agree, or strongly agree with the statement.

- I am aware of ethical dilemmas that arise in pharmacy practice.
- I feel confident in my ability to handle ethical dilemmas that will arise in my future pharmacy practice.
- I know how to apply the Oath of a Pharmacist to resolve dilemmas in pharmacy practice.
- I know how to apply the Code of Ethics for Pharmacists to resolve dilemmas in pharmacy practice.
- My actions as a future pharmacist impact how the profession of pharmacy is viewed by patients.
- My actions as a future pharmacist impact how the profession of pharmacy is viewed by other health care providers.
- I am diplomatic when expressing ideas and opinions.
- I am respectful of individuals who have different backgrounds than mine.

For the following items, choose how important the characteristic is for you as a future pharmacist in upholding the profession (unimportant, moderately important, very important).

- Attending class/clerkship/work daily
- Not expecting anything in return when helping someone
- If arriving late, contacting the appropriate individual at the earliest possible time to inform them
- Exceeding the expectation of others



- Producing quality work
- Completing assignments
- Following through with responsibilities
- Committing to helping others
- Accepting constructive criticism
- Treating all patients with the same respect, regardless of perceived social standing or ability to pay
- Using appropriate names and titles

*(The following items appeared on the preintervention questionnaire only.)*

What is your gender?

Male

Female

What is your age?

18-25 years

26-30 years

31-35 years

36-40 years

41-45 years

over 45 years

What is your highest level of training to date?

Undergraduate pharmacy prerequisites (no degree)

Bachelor's degree

Master's degree

Other

Please specify:

Do you have any full time work experience, 40 hours/week or more? Note: do not include temporary positions such as during summer or semester breaks. Full time work does not need to be pharmacy related.

Yes

No