

Incorporating multiple mini-interviews in the postgraduate year 1 pharmacy residency program selection process

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In an era when competition for pharmacy residency positions is at an all-time high,^{1,2} residency programs must continue to devise new means of identifying the best-

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qualified applicants. One of the most useful tools for this is the onsite interview. A 2012 survey identified the residency interview as the most important means of communication between a residency program director and an applicant.³ Further, the interview is the highest-ranked criterion for acceptance into a pharmacy residency program.⁴

Purpose. The incorporation of the multiple mini-interview (MMI) into the postgraduate year 1 (PGY1) pharmacy residency program selection process was evaluated.

Methods. Four MMI stations evaluating the highest-rated nonacademic attributes of prospective residents (critical thinking, teamwork, ethical reasoning and integrity, and communication and interpersonal skills) were incorporated into the traditional PGY1 residency interview process at an academic medical center. After completion of the interview, candidates and interviewers were surveyed regarding their perceptions of the refined interview process. Data regarding scores on various components of the applicant profile were also compared for significant correlations. Descriptive statistics were calculated for questionnaire responses and individual components of candidate profiles. Pearson's correlation coefficients were calculated between MMI score, traditional interview score, age, grade point average, application score, col-

lege of pharmacy rank, and final candidate rank (subjective score).

Results. A total of 38 candidates were interviewed, 37 of whom completed the postinterview survey. Candidates agreed that the MMI allowed them to convey their abilities effectively; however, they disagreed that it was more effective than traditional interviews. Candidates did not agree that the MMI caused less anxiety than traditional interviews. All 15 interviewers completed the postinterview survey and believed that the MMI effectively evaluated soft skills and that the MMI was more effective than traditional interviews in assessing candidates' abilities, skills, and thought processes.

Conclusion. The use of the MMI in a PGY1 pharmacy residency applicant selection process appeared to be well accepted by both candidates and interviewers and likely assesses different attributes than do traditional interview techniques.

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The interview serves four main purposes: information gathering, decision-making, verification of application data, and recruitment.⁵

However, potential flaws in the traditional interview process have hindered the use of the interview to its full potential. First, the traditional in-



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interview mainly assesses academic criteria.^{4,6} It is not known whether these academic criteria predict success in a pharmacy residency; in fact, it is reasonable to assume that they do not, given their lack of correlation with success in pharmacy school and during clinical rotations.⁷ Second, traditional interviews lend themselves to repetition; as of 2009, nearly 100% of U.S. pharmacy residency programs had interviewers ask candidates why they wanted to complete a residency and where they saw themselves at specific points in the future (e.g., in 5 years, in 10 years).^{4,6} This repetition allows for rehearsed answers that, when added to the currently available residency interview preparatory seminars, courses, and references,⁸⁻¹⁰ limit the ability of the interviewer to truly assess a candidate's appropriateness for a specific program. The third and perhaps most important limitation of the traditional interview is the heterogeneity among interviewers themselves.¹¹ Individual interviewer characteristics such as leniency, severity, and central tendency (i.e., judging all applicants as above average, below average, or average, respectively) may affect scores across a large number of candidates. The halo and contrast effects and sex differences may also falsely inflate or deflate applicants' scores.⁵

The multiple mini-interview (MMI) emerged onto the medical scene in 2004 when McMaster University first reported the use of this format in medical school interviews.¹¹ The MMI consists of a series of 6–10 situational interviews, each of which typically poses a non-medical question designed to assess a specific nonacademic applicant quality (known as a “soft skill”). A candidate may be asked to explain to a five-year-old why the sky is blue or may be presented with more complex, elaborate scenarios addressing crime, conflict resolution, or infidelity. The soft skills these interviews assess, such as teamwork,

professionalism, and integrity, serve to complement technical skills (i.e., “hard skills”) to produce a competitive, high-functioning individual capable of success very early in his or her career.¹²

While the MMI does not remove all subjectivity from interviews, the original study by Eva and colleagues¹¹ and several subsequent studies found consistent ratings among interviewers and among items when using the MMI.¹³⁻¹⁵ Sex discrimination was also eliminated.¹¹ MMI scores may correlate with clerkship performance and licensure examination scores better than do traditional academic markers.^{13,16} The MMI has also received consistently high scores related to fairness, candidate stress, effectiveness, and “enjoyability” both by interviewers and candidates.^{11,12,15,17} Finally, the MMI has been found to be largely cost-effective and easy to implement.^{11,13-15,17,18}

The use of the MMI may prove to be of benefit in colleges of pharmacy, as it assesses attributes different than prepharmacy grade point average and pharmacy college admissions test scores.¹⁹ To date, the potential benefits of the MMI have not been studied in pharmacy residencies, despite validation in multiple other residency programs.^{13,17,20,21} Knowing the importance of soft skills and aiming to decrease bias in our interview process, we evaluated the feasibility of the MMI in our pharmacy residency interview process.

The primary objectives of this study were to (1) develop and implement a new interview process designed to assess the soft and hard skills necessary for success in a postgraduate year 1 (PGY1) pharmacy resident and (2) assess candidate and interviewer acceptance of the MMI as a part of the traditional pharmacy residency interview process.

Methods

Description of the interview process. The University of Kentucky PGY1 pharmacy practice residency

program typically consists of seven or eight residents. The number of applicants generally exceeds 100, with 35–40 candidates scheduled for onsite interviews. Each onsite interview is conducted from 7:30 a.m. until 5:00 p.m., with roughly one hour devoted to individual candidate interviews. Four or five candidates are interviewed per day. Traditionally this process consisted of three separate interviews lasting 20 minutes each; at each interview station, a current resident was paired with a residency preceptor to cointerview a candidate. Questions were generally pulled from a question bank and were similar to those used by other programs.^{4,6}

In 2012, the decision was made to modify the interview process. As the MMI had not yet been validated in pharmacy residency interviews, the MMI was integrated into the interview day. To limit additional use of resources, the total interview time was to be similar to that in previous years (i.e., one hour). Using a time allotment of 7 minutes per scenario,²² this allowed for four 7-minute MMI stations and two 15-minute traditional interview stations.

Development and security of MMI scenarios. An important element of implementing the MMI is to ascertain the core skills (soft skills) the program desires to evaluate in applicants. A survey was sent to current residents and residency preceptors in October 2012 to determine nonacademic attributes (appendix) to be assessed through the use of the MMI as well as baseline interest in participating in the MMI. Based on the results of this survey, the following attributes were deemed most valuable in prospective residents: critical thinking, teamwork, ethical reasoning and integrity, and communication and interpersonal skills. Initial MMI scenarios focusing on these attributes were developed by the authors and reviewed by current residents and residency preceptors.

Education and pilot testing. Methods for educating MMI interviewers have been described previously.¹¹ Building on this model, all potential interviewers who identified themselves as “interested” or “very interested” in participating in the MMI were invited to an educational seminar during which the purpose of the MMI, the role and expectation of interviewers, and an outline of the interview day were reviewed. Interviewers were also provided with written information (eAppendix) and a sample scenario.

The MMI scenarios (critical thinking, teamwork, ethical reasoning and integrity, and communication and interpersonal skills) were pilot tested during mock interview sessions for a residency-focused elective course at our college of pharmacy. Second professional year students enrolled in the elective participated in mock interview sessions, which included two MMI scenarios per session. Each scenario was presented at a separate interview station. Only potential resident or preceptor interviewers were allowed to participate as mock interviewers. No potential residency candidates for 2013 participated.

After the mock interview, interviewers were instructed to complete a survey regarding their perception of the MMI process and to provide suggestions for improvement before implementation of the MMI. Based on these responses, the investigators modified scenarios, timing methodologies, and the evaluation tools before PGY1 pharmacy residency candidate interviews.

Before their interview, candidates were given a brief introduction to the rationale behind and process of using the MMI in interviews (e.g., timing of the interviews, confidentiality of scenarios). This introduction was conducted by the PGY1 pharmacy residency program director for all candidates.

Development of an evaluation tool. The initial scoring of candidate

performance at each MMI station was based on the original McMaster University materials, which are available online.²³ Each scenario was assigned minor components based on the soft skill being assessed (e.g., for communication these included verbal and nonverbal communication skills) as well as an “overall performance” score in which interviewers ranked candidates in the lowest 10% to the highest 1% of all candidates interviewed. After the initial pilot-testing process, the scoring scale was revised to reflect our evaluation tool for traditional interviews wherein candidates are given a subjective score between 1 and 10 instead of a rank.

Data collection. Before their interview, all candidates were required to sign a confidentiality agreement indicating that they would not disclose the details of the interview process (e.g., questions posed). All identifiers were removed at the conclusion of data collection (i.e., Match Day). All data accessed for the purpose of this study were kept in a password-protected file until candidate identifiers were removed.

At the end of their interview day, candidates were sent a nine-item survey (eFigure) via e-mail regarding their perceptions of the MMI and the interview day. Informed consent was obtained before completion of the survey. Surveys were open from the day of the candidate’s interview until March 21, 2013, 11:59 p.m., immediately before the American Society of Health-System Pharmacists Match Day; candidates were made aware of this fact through the informed-consent process to decrease the potential for response bias.

Interviewers were also sent a survey (eFigure) at the conclusion of their final interview day discussing their impression of the MMI, perceived areas of improvement, and willingness to participate in future MMI sessions. Again, surveys were open until March 21, 2013, 11:59 p.m. Data were not extracted from ei-

ther survey until March 23, 2013. All survey-related study data were collected and managed using Research Electronic Data Capture (REDCap) tools hosted at the University of Kentucky.²⁴ REDCap is a secure, Web-based application designed to support data capture for research studies. Most survey responses were collected using a Likert-type scale where 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree.

The University of Kentucky’s institutional review board approved all data points collected as well as all survey instruments involved in this study.

Statistical analysis. Descriptive statistics were calculated for questionnaire responses and individual components of candidate profiles. Pearson’s correlation coefficients were calculated between MMI score, traditional interview score, age, grade point average, application score, college of pharmacy rank (per U.S. News and World Report²⁵), and final candidate rank (subjective score). For survey items, text responses were converted to their corresponding numerical value, and the median and interquartile range were calculated. Wilcoxon rank-sum and Kruskal-Wallis tests were used to assess for differences between median responses of preceptors and those of residents and differences between scores for interview stations, respectively. Wilcoxon rank-sum tests were also used to discriminate between continuous variables assessed among matched and unmatched candidates. Chi-square analysis was used to evaluate discrete variables.

Results

Candidates’ impressions of the MMI. Onsite interviews were offered to 38 candidates, all of whom accepted. Every candidate participated in the MMI. All but 1 candidate completed the postinterview survey (response rate, 97%). A summary

of candidates' survey responses is provided in Table 1. Candidates agreed that the MMI allowed them to convey their abilities effectively; however, they disagreed that it was more effective than traditional interviews. Candidates did not agree that the MMI caused less anxiety than traditional interviews, but they did indicate that the use of the MMI as part of residency recruitment would not deter them from applying to a pharmacy residency program.

In terms of variation between MMI stations, candidates felt that the critical-thinking stations required more specialized knowledge than did

other stations ($p = 0.01$). Traditional interview rooms were also ranked as less difficult than MMI stations ($p < 0.001$). No significant differences in terms of difficulty were noted among MMI stations. Candidates also felt that the traditional interview rooms were not as well timed as the MMI stations ($p = 0.03$). There were no significant differences in timing among individual MMI stations.

As part of the survey, candidates were invited to provide anonymous feedback related to the interview process. Overall, the feedback was quite positive, and most candidates who commented mentioned that

they enjoyed the process. A recurring theme throughout candidate comments was the request for additional time in traditional interview rooms, likely to allow more time for specific questions between the resident and the interviewer.

Interviewers' impressions of the MMI. All 15 interviewers completed the postinterview survey (100% response rate). Survey responses are shown in Table 2. Interviewers agreed that the MMI provided an effective means to evaluate soft skills and that the MMI was more effective than traditional interviews in assessing candidates' abilities, skills, and thought processes. Interviewers did not feel that responses to questions posed during the MMI stations appeared rehearsed or scripted. Interviewers also agreed that all training methods for the new interview process were effective for both themselves and candidates. Finally, interviewers agreed that they would participate in future MMI sessions.

Interviewers were also given the opportunity to provide direct, anonymous feedback related to the process as part of the survey. Again, the feedback was positive, and the majority of interviewers who commented specifically requested that the MMI process continue.

Comparison of interview scores. There were no significant differences in survey responses observed between the 11 resident interviewers and 4 preceptor interviewers (Table 2).

With the exception of traditional interview score and rank ($r = 0.446$), no significant correlations were detected between any two components of the candidates' profiles (Table 3). When comparing matched candidates to those who did not match, no significant differences were found between any components of applicants' profiles (Table 4).

Discussion

To our knowledge, our study is the first published report evaluating the

Table 1.

Candidate Responses to the Post-MMI Questionnaire (n = 37)^a

Questionnaire Item	Median (IQR)
I was able to effectively convey my ability during the MMI sessions.	3 (2–3)
The MMI sessions allowed me to convey my abilities more effectively than traditional interview sessions.	2 (2–3)
The MMI sessions caused me less anxiety than the traditional interview sessions.	2 (2–3)
The use of the MMI would deter me from applying to a pharmacy residency program.	1 (1–2)
The instructions given before the MMI were adequate to prepare me for the experience.	4 (3–4)
The scenarios were descriptive enough to allow me to formulate an answer to the associated questions.	3 (3–4)
The following required specialized knowledge:	
Critical-thinking station	3 (2–3)
Ethical-reasoning station	2 (2–3)
Teamwork station	2 (1–2)
Communication station	2 (2–3)
Traditional interview room	2 (2–3)
The following were difficult:	
Critical-thinking station	2 (2–3)
Ethical-reasoning station	3 (2–4)
Teamwork station	2 (2–3)
Communication station	2 (2–3)
Traditional interview room	2 (1–2)
The following were adequately timed:	
Critical-thinking station	3 (3–3)
Ethical-reasoning station	3 (3–3)
Teamwork station	3 (3–3)
Communication station	3 (3–3)
Traditional interview room	3 (2–3)

^aMMI = multiple mini-interview, IQR = interquartile range. Items were ranked on a scale of 1–4, where 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree.

use of the MMI in the pharmacy residency interview process and the use of both traditional and MMI techniques in PGY1 pharmacy residency interviews.

As a whole, feedback related to the interview process was quite positive, despite a relatively low percentage of residency preceptor interest at baseline (only 4 of the 36 preceptors surveyed participated in the MMI). It is important to note that all 15 interviewers (preceptors and residents) indicated that they would participate in the MMI for future interviews. Further, candidates indicated that the use of the MMI at an institution would not deter them from applying to that institution, suggesting broad acceptance.

In general, candidates felt that the MMI was an effective tool in the current interview process. As MMI stations were not rated as more effective than traditional interviews, the optimal approach likely involves

the assessment of both academic and nonacademic attributes. The requirement of specialized knowledge did not necessarily differ significantly between the MMI stations and traditional interview rooms, except for the MMI critical-thinking sessions, which were management-based scenarios and likely required a higher degree of specialized knowledge than did other interview rooms.

Interestingly, traditional interviews were consistently marked as less stressful than MMI stations. This finding contrasts with previously published data from medical schools suggesting that MMI stations are less stressful than traditional interviews.¹⁵ Our study's findings may relate to the repetitive nature and predictability of traditional interviews among programs, though this is likely the nature of interviews outside of the pharmacy residency as well. An alternative hypothesis is that the

hybrid model allowed candidates to directly compare the expected (traditional) to the unexpected (MMI), which may have disproportionately increased anxiety at the time of the interview, introducing a recollection bias. It is also possible that residency preparatory courses may have played a role in candidate anxiety. These courses aim to prepare students for traditional interviews rather than the MMI. Candidates were not surveyed as to whether they had completed a residency preparatory course. Candidates' responses validate previously published data indicating that seven minutes per MMI station is sufficient to complete each interview.

Our interviewers appeared to find value in the addition of the MMI to traditional interviews. When asked if candidates' responses appeared rehearsed, scripted, or otherwise not authentic, all interviewers disagreed or strongly disagreed, suggesting that the MMI may help avoid biases

Table 2.
Interviewer Responses to the Post-MMI Questionnaire (n = 15)^a

Questionnaire Item	Median (IQR)		p
	Residents (n = 11)	Preceptors (n = 4)	
From my interaction using MMI, I was able to assess the candidate's abilities regarding the scenario at hand (i.e., critical thinking, teamwork, ethical reasoning, or communication skills).	3 (3–3)	3.5 (3–4)	0.23
The MMI sessions gave me a more accurate representation of candidate abilities, skills, and thought processes than traditional interviews.	3 (2–3)	3.5 (3–4)	0.11
In general, candidate responses to MMI scenarios appeared rehearsed, scripted, or otherwise ingenuine.	2 (1–2)	2 (1.75–2)	0.69
The MMI was easier to administer than traditional interviews.	3 (2–3)	2 (1.75–3.25)	0.95
The materials provided to me before the MMI were adequate to prepare me for the experience.	3 (3–4)	3 (3–3)	0.23
The training seminars (including mock MMI) were adequate to prepare me for the experience.	3 (3–3.5)	3 (3–3.25)	0.69
Candidates understood what was expected of them before entering my interview room.	3 (3–3)	3 (3–3.25)	0.44
The MMI sessions were neither advantageous nor disadvantageous to any specific group of candidates (e.g., English as a primary vs. nonprimary language, male vs. female gender, earlier vs. later in the interview sessions).	3 (3–3)	2.5 (2–3.25)	0.52
I am willing to participate in future MMI sessions.	3 (3–4)	3.5 (3–4)	0.65

^aMMI = multiple mini-interview, IQR = interquartile range. Items were ranked on a scale of 1–4, where 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree.

Table 3. Correlation Among Components of the Applicant Profile (n = 38)^a

Demographic	Pearson's Correlation Coefficient (r)						
	Age	MMI Score	Traditional Score	Application Score	GPA	COP Rank ²⁵	Numerical Rank
Age	1.0	0.026	0.026	0.003	0.005	0.012	0.016
MMI score	... ^b	1.0	0.059	0.003	0.040	0.001	0.040
Traditional score	...	...	1.0	0.036	0.053	0.021	0.446
Application score	...	...	...	1.0	0.191	0.046	0.067
GPA	...	...	...	...	1.0	0.053	0.022
COP rank ²⁵	...	...	...	...	...	1.0	0.006
Numerical rank	...	...	...	...	...	...	1.0

^aMMI = multiple mini-interview, GPA = grade point average, COP = college of pharmacy.

^bNot applicable.

Table 4. Characteristics of Matched Versus Unmatched Candidates^a

Criterion	Matched at Institution (n = 7)	Did Not Match at Institution (n = 31)	p
Age (range), yr	25 (24.5–26)	25 (24–26)	0.66
Male, no. (%)	3 (42.8)	5 (16.1)	0.15
MMI score (range) ^b	8 (7.5–8.75)	8 (7.5–8.5)	0.94
Traditional interview score (range) ^b	8.75 (8.19–8.75)	8.25 (7.75–8.81)	0.43
Application score (range) ^c	34.7 (34.25–36.5)	35.5 (34.25–36.5)	0.74
GPA (range)	3.72 (3.49–3.92)	3.81 (3.66–3.93)	0.55
COP rank (range) ²⁵	5 (5–32.5)	7 (5–29)	0.74

^aMMI = multiple mini-interview, GPA = grade point average, COP = college of pharmacy.

^bThe maximum score that can be attained is 10.

^cThe maximum score that can be attained is 40.

associated with the repetitive nature of traditional interviews. It should be emphasized that this belief held true regardless of the core value assessed and likely reflects the novelty of the MMI as well as the effectiveness of agreements signed by candidates as a means of protecting scenario confidentiality.

No correlation was found between MMI scores and any other component of an applicant's portfolio, suggesting that the MMI does assess different attributes than traditional markers (e.g., interview and application scores). Pearson's correlation coefficients were quite small for comparisons between nearly all major components of an applicant's profile, which likely suggests that each piece of information successfully assessed a

different attribute. It should be noted that because of the small sample size and relative homogeneity of the interview pool, the lack of correlation between all components of the applicant profile, including MMI score, could be due to chance. This claim may be substantiated by the lack of difference in scores between matched and unmatched candidates.

Multiple post hoc analyses were performed to determine the capability of the MMI to provide objective data related to discrepancies between various components of the candidate profile (e.g., discrepancies between traditional interview rooms, discrepancies between projected and final rank). No significant correlations were found in these analyses, likely due to the small

number of candidates interviewed per rotation year.

This study represents one of the first published reports of using targeted interview questions to specifically inquire about the attributes most valuable to a residency program. The availability of a published list of highly rated nonacademic attributes specific to the field of pharmacy¹⁹ was instrumental in the implementation of the MMI at this institution, as most previously published data relate to medical schools and medical residency programs. The use of previously validated scenarios would have further expedited the process. An evolving question bank, as well as the use of professionally validated scenarios such as those used by the ProFitHR Candidate Assessment System (Advanced Psychometrics for Transitions, McMaster Innovation Park, Ontario, Canada), is being investigated. The recruitment process was deemed a success; correlations with success in residency are planned in the coming year.

Study limitations. This study had several limitations. First, the small sample size of both interviewers and candidates likely affected power and the validity of the lack of correlations found. Yet, Pearson's correlation coefficients were quite low between MMI scores and all other components of the candidate profile ($r < 0.06$ for all comparisons), suggesting

that these findings would have likely held true with additional candidate-interview exposures. Second, the scenarios used had not been previously validated; these were studied in the pilot-testing process and revised with the contributions of an extensive panel comprising multiple residents and preceptors. Third, candidate responses may have been inadvertently biased through a predisposition to answer questions favorably, though this is unlikely given the anonymous nature of the administered surveys. Fourth, only interviewers who identified themselves as interested or very interested were invited to participate in the MMI, which may have led to overly positive impressions of the MMI. Finally, the use of the MMI at a single, well-established academic medical center's PGY1 program may limit application of these findings to smaller community hospital or other pharmacy residencies and postgraduate year 2 programs.

Lessons learned and areas for future research. Before implementation of the MMI, a number of logistic issues had to be addressed. The first of these was physical space allocation for the interview, as each scenario required an additional room; affiliation with a college of pharmacy was beneficial, as the college already had objective structured clinical examination rooms that were ideal for the MMI. The second issue was the need for additional volunteers to facilitate room transfers between interviews; this was typically conducted by the interview-day coordinator who was a current resident at our institution. Synchronized timers were also available in each room to maintain the schedule. The third logistic issue was the need for additional interviewers, which was easily overcome with the incorporation of additional residents into the process. This allowed residents to individually interview candidates and provided a valuable learning experience for all involved. Finally, maintaining the scenario

security was paramount, and confidentiality agreements signed before the interviews proved quite effective.

An additional barrier noted by some interviewers was the potential disadvantage to candidates who spoke English as a second language. As this has not been described comparatively in the literature, it may represent an area of further investigation. However, as communication skills are generally a component of all interviews and must be strong for a candidate to function effectively as a member of the health care team, we do not believe this influenced our final decision.

Despite these minor barriers, the MMI was added to our program's traditional interview process and likely assessed new areas (e.g., soft skills) that were not previously measured. If used appropriately, the MMI allows programs to develop targeted, novel questions to assess the highest-valued attributes in residents and practitioners. Further, the MMI increases resident involvement in recruitment and allows for direct comparisons to be made between applicants as they are provided the same (or similar) scenarios. Given prior findings that the MMI decreases interviewer biases and contributes to a genuine assessment of the candidate as a whole, replications of this research and follow-up studies are certainly warranted.

With minor refinements in scenarios and time allotment, the use of the MMI is scheduled to continue at our institution. These refinements will allow for additional data collection in the coming years. Areas for future study include identification of the optimal combination of hard-skills and soft-skills assessments, acceptance and feasibility of the MMI at other institutions, and correlation of MMI scores with success in residency and beyond.

Conclusion

The use of the MMI in a PGY1

pharmacy residency applicant selection process appeared to be well accepted by both candidates and interviewers and likely assesses different attributes than do traditional interview techniques.

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Appendix—Description of nonacademic attributes of residency candidates^a

Commitment to care

- Compassionate, helpful, respectful, conscientious
- Supportive and understanding
- Responsible
- Empathetic, humane, sensitive

Critical thinking, problem solving, creativity

- Critical thinking: purposeful and reflective judgment, questioning, inquisitive
- Problem solving: gather and assess relevant information, determine well-reasoned solution
- Creativity: think outside the box, open-minded, original/novel ideas and expression

Ethical reasoning, integrity

- Able to apply ethical principles when solving problems

- Having a sense of honesty and truthfulness in regard to the motivations for one's actions

Interpersonal skills

- Well-mannered, confident, poised
- Assertive (not shy), positive presence
- Self-controlled
- Appropriate nonverbal skills

Motivation to be a pharmacist

- Desire to become a pharmacist
- Aware of pharmacy's evolving role in the United States healthcare system

Oral communication skills

- Clear and effective oral skills
- Active, unbiased listening skills

Self-awareness

- Able to identify and understand one's emotions, goals, and motivations; and their effect on one's actions and on other individuals

Team player

- Instructive, sharing, respectful, collaborative, constructive
- Potential for leadership
- Able to work in a coordinated effort with others to strive for a common goal

^aAdapted from reference 18.