BRIEF

A Job Analysis to Define the Role of the Pharmacy Preceptor

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Objective. To use a comprehensive job analysis to identify and describe the roles and responsibilities of pharmacist preceptors.

Methods. After gathering input from local pharmacist preceptors, a task inventory questionnaire was created that included 92 tasks divided among nine domains related to the job of preceptors. The task inventory questionnaire was distributed to expert pharmacist preceptors in the United States, which were those who had been recognized for excellence in precepting by a national organization. Participants evaluated each task and determined whether they were responsible for the task, as well as the importance, difficulty, and frequency of each task. A composite score for each task was calculated based on a unique combination of these ratings. Descriptive statistics summarized the findings for each task and across the domains.

Results. Nineteen pharmacist preceptors completed the task inventory questionnaire. The three most salient domains were professionalism \((M=41.9, SD=12.9)\), communication \((M=37.0, SD=11.7)\), and interpersonal skills \((M=37.0, SD=10.3)\). The three most critical tasks related to professionalism were maintaining professional composure in stressful situations, demonstrating a commitment to service and the profession, and engaging in sound ethical and moral decision-making.

Conclusion. This study represents the first attempt of using a job analysis to define pharmacist preceptor roles and responsibilities. More research is needed to fully understand the implications of these results, to understand how the relative significance of tasks may vary based on the population assessed (eg, learners and less experienced pharmacists), and to improve and validate the findings of the task inventory questionnaire developed in this study.

Keywords: preceptor development, experiential education, task inventory questionnaire, job analysis

INTRODUCTION

Pharmacy preceptors perform a critical role in the education and professional development of future pharmacists, but what exactly does being a preceptor mean? The American Society of Health-Systems Pharmacists and the Accreditation Council for Pharmacy Education Standards 2016 outline requirements for selecting and maintaining high-quality preceptors; however, details regarding the roles and responsibilities of these preceptors remain elusive. The current understanding of these roles and responsibilities is based on a fragmented body of literature that includes learner perceptions of precepting excellence, needs assessments in experiential education, and preceptor development programming initiatives. This body of research is varied as the focus is often on specific elements of preceptorship or those exclusively related to the learner-preceptor interaction as it relates to teaching. For example, preceptor development programming will typically identify one area of improvement (eg, communication, rotation planning, giving feedback, etc.) instead of considering all elements of the preceptor’s role and responsibilities. In addition, little research has included preceptors’ perspectives and understanding of their role. Instead, research has focused primarily on student perceptions of teaching excellence.

Few research studies have adequately characterized the “job” of the preceptor, and gathering information from experts in this role could help the academy to articulate more holistic competencies needed in preceptors.

Job analyses, often used in human resources research, offer a solution to address this gap in the literature. In general, job analyses are used to create job descriptions, identify evaluation criteria, and inform licensure examinations. Job analyses can incorporate many different methodologies depending on the purpose and desired outcomes. Most often
these approaches include surveying experts who have served in these roles for extended periods of time or have been recognized for their excellence in the field. The experts are surveyed systematically and requested to quantify certain tasks and responsibilities to identify those that are most salient according to their experience.

The job analysis is a novel approach to defining the roles and responsibilities of preceptors as it extends current research to include the perceptions of highly qualified preceptors using a systematic and comprehensive assessment strategy. In addition, a job analysis has future benefits as it can be refined and tested with multiple stakeholders to see how perceptions of the job vary across time or groups (ie, students, residents, health care professionals, etc.). Despite the importance of one, a pharmacy preceptor job analysis has not been documented in the literature. Therefore, the goal of this study was to build a comprehensive tool for gathering data and report our findings from using the tool with a pilot group of pharmacy preceptor experts. Overall, identifying these roles and responsibilities has the potential to greatly impact educational practices by informing preceptor recruitment, training, development, and assessment.

**METHODS**

The study was conducted using a task inventory questionnaire, which is a specific job analysis method. Task inventory questionnaires include a comprehensive list of tasks believed to be completed by an individual in their job; the level of detail can vary based on the purposes of the research. Job experts are requested to evaluate each task on a series of criteria such as whether they are responsible for the task, the importance, and difficulty of the task, and the frequency with which they complete the task.

The researchers collaborated with local pharmacy preceptors who practiced in hospital (clinical and operational) and/or ambulatory care settings to create a task inventory questionnaire based on applicable theoretical frameworks, empirical evidence, and anecdotal recommendations. The final task inventory questionnaire included 92 tasks divided among nine domains: planning/logistics, communication, interpersonal, intrapersonal, clinical knowledge, assessment, teaching, leadership, and professionalism. The task inventory questionnaire was distributed using Qualtrics (Provo, UT), an electronic survey software. Participants had four weeks to complete the survey and were sent multiple reminder emails to promote survey completion.

The sampling frame included expert pharmacist preceptors, which were defined as those who were nationally recognized for precepting excellence by a professional organization: American Association of Colleges of Pharmacy (AACP), American Pharmacist Association (APhA), American Society of Health-System Pharmacists (ASHP), or American Colleges of Clinical Pharmacy (ACCP). Preceptors were excluded if they were retired, deceased, or if their contact information could not be located.

Participants were asked to evaluate each task based on their responsibility for the task and the importance, difficulty, and frequency of the task. Responsibility was answered as either yes or no, importance and difficulty were evaluated on a four-point scale (not at all, low, moderate, high), and frequency was evaluated on a six-point scale (less than annually, annually, quarterly, monthly, weekly, or daily). Survey responses were included only if participants completed the entire survey (ie, they evaluated all 92 tasks).

Participants’ responses were converted to numerical values for quantitative analysis. Mean criteria scores were calculated for each task, which were then used to calculate a composite task score using the following equation: composite score = [(importance x frequency) + difficulty] x responsibility. This equation was created based on prior research using task inventory questionnaires and the relative significance of each criteria. Importance, for instance, is highly critical in identifying salient job tasks; therefore, this value was squared so it would have greater weight. This is multiplied by frequency as tasks that are done more often are essential to the job regardless of the importance or difficulty of the task. Difficulty was added to this model because difficulty can be accommodated based on training; as a result, it does not have as substantial of a role in the overall task significance. Finally, the score was multiplied by the percent of participants who identified the task to be their responsibility as a preceptor. The importance, difficulty, and frequency of a task were not evaluated by participants who said the task was not their responsibility. Therefore, the responsibility score was used as a modifier to adjust for tasks that may have otherwise been scored high by a small number of experts.

Domain criteria scores (responsibility, importance, difficulty, frequency, and composite) were calculated based on the average values for the tasks comprising that domain. These values would be used to rank domains in terms of these criteria. Individual criteria scores were also compared to identify tasks that were classified high or low on these scales as salient targets for training programs (eg, high difficulty, frequency, and importance) and other practical applications. The study was considered exempt from full review by the Duke University Hospital Institutional Review Board.
RESULTS

The task inventory questionnaire was distributed to 96 nationally recognized pharmacist preceptors. Nineteen responses were included in the final analysis. Because of the length and complexity of task inventory questionnaires, the low response rate (20%) was sufficient for and consistent with pilot research. Participants were predominantly male (n=13, 68%) with a median of 20 years pharmacy precepting experience that included a variety of learner types (Table 1).

The three critical domains based on average composite score were professionalism (M=41.9, SD=12.9), communication (M=37.0, SD=11.7), and interpersonal skills (M=37.0, SD=10.3). Domain scores based on the criteria are shown in Table 2, and a complete list of individual tasks with their respective scores are provided in Appendices 1-3. The three tasks that preceptors said were most critical to professionalism were maintaining professional composure in stressful situations, demonstrating a commitment to service and the profession, and engaging in sound ethical and moral decision-making. Table 3 provides a summary of pertinent tasks based on their relative performance on the criteria.

DISCUSSION

The purpose of this research was to use a task inventory questionnaire to begin defining the roles and responsibilities of pharmacist preceptors in educating learners. At the time of this research, there were no examples in the literature that included a comprehensive and systematic approach to define the job of preceptors. Therefore, this research outlines a novel strategy to address a significant gap in the literature and establishes a foundation for future research on the roles and responsibilities of preceptors. This research expands our understanding of preceptorship by considering the relevant elements beyond just the teaching components, which are often overlooked yet highly significant. To improve preceptor training, competency development, and accountability, we argue that a holistic and comprehensive approach is necessary.

Table 1. Demographics of Pharmacy Preceptors Who Completed a Task Inventory Questionnaire as Part of a Study to Define the Preceptor’s Role in Pharmacy Education (N=19)

| Participant Demographic                        | Value     |
|-----------------------------------------------|-----------|
| Male, n (%)                                   | 13 (68)   |
| Median age, years (IQR)                       | 48 (39-60.5) |
| Median years practicing pharmacy, years (IQR) | 25 (16-36.5) |
| Education, training, & certifications, n (%)  |           |
| Doctor of Pharmacy (PharmD)                   | 16 (84)   |
| Postgraduate Year 1 (PGY1) Pharmacy Residency | 10 (53)   |
| Postgraduate Year 2 (PGY2) Specialty Residency| 5 (26)    |
| Board Certification                           | 13 (68)   |
| Primary practice area, n (%)                  |           |
| Hospital (clinical)                           | 7 (37)    |
| Academia                                      | 6 (31)    |
| Ambulatory Care                               | 2 (11)    |
| Hospital (operational)                        | 2 (11)    |
| Community                                     | 1 (5)     |
| Industry                                      | 1 (5)     |
| Types of learners precepted, n (%)            |           |
| Introductory Pharmacy Practice Experience (IPPE)| 9 (47)  |
| Advanced Pharmacy Practice Experience (APPE)  | 17 (89)   |
| Residents                                     | 16 (84)   |
| New hires                                     | 7 (37)    |
| Non-pharmacy professionals                    | 6 (32)    |
| Precepting Experience, median (IQR)           |           |
| Years precepting                              | 20 (15-32.5) |
| Years with a faculty appointment              | 18 (10-25) |
| IPPE students precepted in past year          | 3 (0-6)   |
| APPE students precepted in past year          | 4 (2-7)   |
| Residents precepted in past year              | 6 (2-7.5) |
| Preceptor awards & recognitions               | 2 (2-3)   |

*a Multiple selections permitted
The comprehensive approach offers extensive information that can be tailored towards the needs of the researcher or other stakeholders.

A significant limitation of this pilot study was the small sample size. The time required to complete the 92-item task inventory questionnaire was probably a significant deterrent to preceptor participation. The submitted responses, however, are still valuable as they reflect the opinions of subject matter experts who have been nationally recognized for their skill sets. However, caution should be used when interpreting the results as it is highly possible the results do not reflect those that would have been obtained from a larger sample of exceptional preceptors. Although the sample of participants was varied, there was a dearth of respondents from community practice settings and a lot of responses from academicians who did not include their specialty or practice area. The preceptor job responsibilities may be nuanced in select specialties; however, when designing the job analysis for this study, the researchers aimed to be inclusive and generic in the descriptions to make the instrument applicable to identify minimum standards across multiple disciplines. As previously discussed, the role of this pilot study was to develop the tool and describe initial findings that should be confirmed with large-scale research including a more expansive range of preceptors and other stakeholders.

The use of job analysis techniques should be carefully considered in future research because they may represent a narrow view of the job itself; for example, the inclusion of other methodologies such as observations and interviews can be used to support the validity of findings using the task inventory questionnaire. In addition, the task inventory questionnaire may require modifications that are more encompassing of all preceptors.

Table 2. Domain Scores on the Task Inventory Questionnaire Completed by Pharmacy Preceptors as Part of a Study to Define the Preceptor’s Role in Pharmacy Education

| Domain                   | Composite | Frequency | Difficulty | Responsibility | Importance |
|--------------------------|-----------|-----------|------------|----------------|------------|
|                          | M (SD)    | Range     | M (SD)     | Range          | M (SD)     | Range     | M (SD)    | Range     | M (SD)    | Range     |
| Professionalism          | 41.9 (12.9)| 18.3-55.2 | 5.3 (0.9)  | 3.6-6.0        | 1.3 (0.3)  | 0.7-1.7   | 98.9 (0.1)| 88.9-100  | 2.7 (0.3) | 2.2-3.0   |
| Communication            | 37.0 (11.7)| 16.5-49.2 | 5.4 (0.5)  | 4.1-5.8        | 1.4 (0.4)  | 0.7-1.9   | 95.0 (0.1)| 77.8-100  | 2.6 (0.4) | 1.9-2.9   |
| Interpersonal            | 37.0 (10.3)| 14.4-48.2 | 5.4 (0.4)  | 4.7-5.8        | 1.3 (0.3)  | 0.9-1.9   | 97.2 (0.1)| 83.3-100  | 2.6 (0.4) | 1.7-2.9   |
| Assessment               | 26.4 (11.5)| 11.1-50.2 | 3.9 (1.0)  | 2.3-5.6        | 1.7 (0.2)  | 1.5-1.9   | 88.9 (0.1)| 66.7-100  | 2.6 (0.2) | 2.4-2.9   |
| Planning & Logistics     | 22.3 (7.1)| 7.4-29.0  | 3.7 (0.6)  | 3.0-4.7        | 1.4 (0.3)  | 1.0-1.9   | 80.5 (0.2)| 26.3-94.7 | 2.7 (0.2) | 2.2-3.0   |
| Leadership               | 20.2 (13.2)| 4.5-46.7  | 3.9 (1.5)  | 1.8-5.7        | 1.9 (0.4)  | 1.2-2.3   | 79.4 (0.2)| 50.0-100  | 2.3 (0.30)| 1.8-2.8   |
| Teaching                 | 19.7 (12.3)| 3.4-42.8  | 3.8 (1.1)  | 1.9-5.3        | 1.8 (0.3)  | 1.3-2.2   | 75.8 (0.2)| 27.8-100  | 2.4 (0.2) | 2.0-2.8   |
| Intrapersonal            | 16.2 (8.8)| 4.2-29.6  | 3.1 (0.9)  | 1.8-4.6        | 1.5 (0.3)  | 1.1-2.1   | 86.7 (0.1)| 66.7-100  | 2.3 (0.4) | 1.7-2.7   |
| Clinical Knowledge       | 16.1 (6.9)| 6.4-27.0  | 3.02(0.69) | 1.9-3.9        | 1.7 (0.3)  | 1.2-2.2   | 82.2 (0.1)| 61.1-100  | 2.4 (0.2) | 1.9-2.6   |

a Composite score = [(importance x frequency) + difficulty] x responsibility
b Frequency score: less than annually (1), annually (2), quarterly (3), monthly (4), weekly (5), and daily (6)
c Difficulty score: not at all (0), low (1), moderate (2), and high (3)
d Responsibility score (as a percentage): no (0) and yes (1)
e Importance score: not at all (0), low (1), moderate (2), and high (3)
Conversely, the task inventory questionnaire can be condensed to more specific tasks if there is a suspicion that preceptor roles and responsibilities are more specialized based on practice setting (eg, hospital, ambulatory care, community). In summary, the task inventory questionnaire provides a comprehensive, systematic, and novel approach to defining the roles and responsibilities of preceptors that can be used to inform training, practice, and educational initiatives.

| Recommendations and Criteria                                      | Sample Tasks (Domain)                                                                 |
|-------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| **Establish Training and Assess Competencies**                    |                                                                                                                                 |
| High Importance & High Difficulty                                | Facilitate conflict management effectively (Leadership)                              |
|                                                                  | Motivated students to be active participants (Teaching)                              |
|                                                                  | Perform periodic self-assessment and reflection (Intrapersonal)                      |
| High Difficulty & High Frequency                                 | Motivate students to be active participants (Teaching)                              |
|                                                                  | Facilitate conflict management effectively (Leadership)                              |
|                                                                  | Identify the needs of others (Interpersonal)                                         |
| High Importance & High Frequency                                 | Maintain professional composure in stressful situations (Professionalism)             |
|                                                                  | Demonstrate a commitment to service and the profession (Professionalism)             |
|                                                                  | Engage in sound ethical and moral decision-making (Professionalism)                  |
| Create Quick References and Resources or On-Demand Training      |                                                                                                                                 |
| High Importance & Low Frequency                                  | Present or lead a session at interprofessional conferences (Leadership)              |
|                                                                  | Use of precepting technologies such as RxPreceptor, etc. (Intrapersonal)             |
|                                                                  | Attend courses and workshops on teaching strategies (Teaching)                       |
| High Difficulty & Low Frequency                                  | Present or lead a session at a local, state, or national conference (Leadership)     |
|                                                                  | Maintain board certification (Clinical Knowledge)                                    |
|                                                                  | Active involvement in state or national pharmacy associations (Leadership)           |
| Automate or Shift to Support Staff                               |                                                                                                                                 |
| High Frequency & Low Importance                                  | Share information about yourself with the learner (Interpersonal)                    |
|                                                                  | Work beyond normal and typical hours for precepting (Intrapersonal)                  |
|                                                                  | Document self-assessments and or reflections (Clinical Knowledge)                    |
| High Difficulty & Low Importance                                 | Work beyond normal and typical hours for precepting (Intrapersonal)                  |
|                                                                  | Active involvement in interprofessional organizations (Leadership)                   |
|                                                                  | Present or lead a session at interprofessional conferences (Leadership)              |
| Provide Support When Necessary                                   |                                                                                                                                 |
| High Frequency & Low Difficulty                                  | Dress in appropriate work attire and use proper hygiene (Professionalism)            |
|                                                                  | Communicate with learners via e-mail and mobile devices (Communication)              |
|                                                                  | Share information about yourself with the learner (Interpersonal)                    |
| High Importance & Low Difficulty                                 | Complete site required documentation for learners (Planning & Logistics)            |
|                                                                  | Demonstrate a commitment to service and the profession (Professionalism)            |
|                                                                  | Engage in sound ethical and moral decision-making (Professionalism)                  |
| Low Frequency & Low Importance                                   | Use of precepting technologies such as RxPreceptor, etc. (Intrapersonal)             |
|                                                                  | Present or lead a session at interprofessional conferences (Leadership)              |
|                                                                  | Active involvement in interprofessional organizations (Leadership)                   |
| Low Difficulty & Low Importance                                  | Communicate with learners via e-mail and mobile devices (Communication)              |
|                                                                  | Share information about yourself with the learner (Interpersonal)                    |
|                                                                  | Dress in appropriate work attire and use proper hygiene (Professionalism)            |
| Low Frequency & Low Difficulty                                   | Use of precepting technologies such as RxPreceptor, etc. (Intrapersonal)             |
|                                                                  | Attend formal preceptor development continuing education (Intrapersonal)             |

**CONCLUSION**

This research presents the first attempt of using a job analysis to define the roles and responsibilities of pharmacy preceptors. The three most critical domains identified by expert preceptors included professionalism, communication skills, and interpersonal skills. More research is needed to fully understand the implications of these results, to understand how the relative significance of tasks may vary based on the population assessed, and to
improve and validate the findings of the task inventory questionnaire developed in this study.

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Appendix 1. Criteria and Composite Scores (Mean Values) for Tasks in the Top Three Domains on the Preceptor Task Inventory Questionnaire

| Domain and Tasks                                                                 | Composite | Importance | Difficulty | Frequency | Responsibility |
|----------------------------------------------------------------------------------|-----------|------------|------------|-----------|----------------|
| **Professionalism**                                                              |           |            |            |           |                |
| Maintain professional composure in stressful situations                           | 55.2      | 3.0        | 1.7        | 5.9       | 100.0          |
| Demonstrate a commitment to service and the profession                           | 53.1      | 2.9        | 1.1        | 6.0       | 100.0          |
| Engage in sound ethical and moral decision-making with regard to patient care and interaction with others | 52.2      | 2.9        | 1.2        | 5.9       | 100.0          |
| Contribute to a positive work culture                                            | 47.3      | 2.8        | 1.4        | 5.9       | 100.0          |
| Arrive to work and meetings on time                                              | 47.1      | 2.8        | 1.2        | 5.9       | 100.0          |
| Dress in appropriate work attire and maintain proper hygiene                     | 43.9      | 2.7        | 0.7        | 5.8       | 100.0          |
| Demonstrate cultural competence and awareness and significance of cultural differences | 41.5      | 2.7        | 1.6        | 5.4       | 100.0          |
| Serve as a mentor to support students as they advance the profession              | 40.6      | 2.8        | 1.4        | 4.9       | 100.0          |
| Encourage learners to attend and participate in local, state, and national meetings (committee, staff, faculty) | 20.1      | 2.2        | 1.6        | 3.9       | 100.0          |
| Promote learner interaction and/or involvement with professional organizations    | 18.3      | 2.3        | 1.6        | 3.6       | 88.9           |
| **Communication**                                                                |           |            |            |           |                |
| Model effective communication strategies                                          | 49.2      | 2.9        | 1.3        | 5.7       | 100.0          |
| Actively listen to learner’s concerns and or questions                            | 49.2      | 2.9        | 1.3        | 5.7       | 100.0          |
| Answer learner’s questions clearly                                               | 46.9      | 2.8        | 1.4        | 5.8       | 100.0          |
| Think aloud and describe the decision making to illustrate the thinking process   | 45.1      | 2.8        | 1.2        | 5.6       | 100.0          |
| Teach the learner about effective written communication (eg, chart documentation, emails, etc.) | 41.7      | 2.8        | 1.8        | 5.4       | 94.4           |
| Teach the learner about effective communication with other health care professionals | 41.0      | 2.7        | 1.6        | 5.4       | 100.0          |
| Provide coaching on written documents and notes produce by the learner            | 39.0      | 2.7        | 1.8        | 5.1       | 100.0          |
| Teach the learner about effective communication with patients                     | 34.4      | 2.8        | 1.9        | 5.4       | 77.8           |
| Provide coaching on formal presentation skills                                    | 22.4      | 2.4        | 1.6        | 4.1       | 88.9           |
| Communicate with learner via electronic mail                                     | 21.9      | 2.0        | 0.7        | 5.3       | 100.0          |
| Communicate with learner via mobile device (voice calling and or text messaging) | 16.5      | 1.9        | 0.7        | 5.3       | 83.3           |
| **Interpersonal**                                                                |           |            |            |           |                |
| Maintain a positive attitude towards others (eg, patients, health care providers, learners, etc.) | 48.2      | 2.9        | 1.2        | 5.8       | 94.4           |
| Promote healthy relationships with others (eg, patients, health care providers, learners, etc.) | 47.3      | 2.8        | 1.3        | 5.7       | 100.0          |
| Convey confidence in learner’s ability to achieve your expectations              | 43.8      | 2.8        | 1.3        | 5.5       | 100.0          |
| Work to understand individual interests and goals (eg, patients, healthcare providers, learners, etc.), | 40.0      | 2.7        | 1.8        | 5.5       | 94.4           |
| Identify the needs of others (eg, patients, health care providers, learners, etc.) | 39.4      | 2.6        | 1.9        | 5.5       | 100.0          |
| Model professional relationships with colleagues and other health care providers | 38.6      | 2.7        | 1.1        | 5.3       | 100.0          |
| Convey confidence in yourself, the services you provide, and in your real-world experience | 38.4      | 2.6        | 1.0        | 5.7       | 100.0          |

(Continued)
Appendix 1. (Continued)

| Domain and Tasks                                                                 | Composite | Importance | Difficulty | Frequency | Responsibility |
|---------------------------------------------------------------------------------|-----------|------------|------------|-----------|----------------|
| Demonstrate a genuine interest in the learner (ask questions about them, their   | 35.0      | 2.5        | 1.2        | 5.4       | 100.0          |
| family, or hobbies)                                                              |           |            |            |           |                |
| Engage in interprofessional education (eg, teach non-pharmacy learners)          | 24.9      | 2.5        | 1.5        | 4.7       | 83.3           |
| Share information about yourself with the learner                               | 14.4      | 1.7        | 0.9        | 4.8       | 100.0          |

* Composite score = [(importance² x frequency) + difficulty] x responsibility
Frequency score: less than annually (1), annually (2), quarterly (3), monthly (4), weekly (5), and daily (6)
Difficulty score: not at all (0), low (1), moderate (2), and high (3)
Responsibility score (as a percentage): no (0) and yes (1)
Importance score: not at all (0), low (1), moderate (2), and high (3)
Appendix 2. Criteria and Composite Scores (Mean Values) for Tasks in the Middle Three Domains on the Preceptor Task Inventory Questionnaire

| Domain and Tasks                                                                 | Composite | Importance | Difficulty | Frequency | Responsibility |
|----------------------------------------------------------------------------------|-----------|------------|------------|-----------|----------------|
| **Assessment**                                                                   |           |            |            |           |                |
| Provide informal feedback to learners (eg, periodic verbal feedback)              | 50.2      | 2.9        | 1.6        | 5.6       | 100.0          |
| Foster self-reflection in the learner for continuous improvement                  | 35.9      | 2.7        | 1.7        | 4.6       | 100.0          |
| Provide formal final (eg, summative) evaluation of learners                      | 32.3      | 2.8        | 1.9        | 3.8       | 100.0          |
| Document feedback and evaluations of learners                                    | 27.7      | 2.7        | 1.6        | 3.7       | 100.0          |
| Assess learner performance with regards to clinical experience and expectations   | 27.4      | 2.6        | 1.9        | 4.2       | 88.9           |
| Provide formal interim (eg, formative) evaluation of learners                    | 25.3      | 2.6        | 1.5        | 4.3       | 83.3           |
| Assess learner’s readiness for assignments and clinical practice                 | 22.8      | 2.4        | 1.6        | 4.3       | 88.9           |
| Assess learner’s entry-level knowledge and previous experiences (eg, conduct gap analysis) | 18.4      | 2.4        | 1.9        | 3.9       | 77.8           |
| Develop learning objectives for the experience prior to learner arrival          | 12.9      | 2.4        | 1.8        | 2.3       | 83.3           |
| Design assessment strategies of learners (eg, rubrics, expectations, etc.)        | 11.1      | 2.4        | 1.6        | 2.5       | 66.7           |
| **Planning and Logistics**                                                       |           |            |            |           |                |
| Orient learner to practice site, staff, objectives, policies, and resources       | 29.0      | 2.9        | 1.2        | 3.5       | 94.7           |
| Design rotation learning activities (eg, assignments, topic discussions, reflections, etc.) | 28.8      | 2.9        | 1.8        | 3.4       | 94.7           |
| Individualize and adjust the experience based on learner goals                   | 28.7      | 2.6        | 1.6        | 4.5       | 89.5           |
| Adjust the learning experience plan and schedule according to learner and or emergent needs | 27.3      | 2.4        | 1.7        | 4.7       | 94.7           |
| Organize topic discussions matched to experience objectives                       | 24.0      | 2.6        | 1.4        | 4.0       | 84.2           |
| Create a schedule for the learner’s experience (eg, a calendar of activities)   | 23.5      | 2.8        | 1.2        | 3.4       | 84.2           |
| Create projects for the learner to contribute to practice improvement (eg, medication reviews, P&T, etc.) | 22.0      | 2.4        | 1.9        | 3.7       | 94.7           |
| Request access and materials for the learner (eg, badge, computer, etc.)         | 16.3      | 2.9        | 1.2        | 3.2       | 57.9           |
| Collaborate with other preceptors to organize learner activities, local meetings, etc. (eg, team teaching) | 15.9      | 2.2        | 1.4        | 3.6       | 84.2           |
| Complete site required documentation of learner prior to arrival (eg, HIPAA, privacy, registration, etc.) | 7.4       | 3.0        | 1.0        | 3.0       | 26.3           |
| **Leadership**                                                                   |           |            |            |           |                |
| Ensure adherence to work-place policies and procedures                           | 46.7      | 2.8        | 1.6        | 5.6       | 100.0          |
| Facilitate conflict management effectively                                        | 28.7      | 2.6        | 2.3        | 4.6       | 88.9           |
| Inspire team members to achieve target goals and initiatives                     | 27.5      | 2.4        | 1.7        | 4.9       | 94.4           |
| Delegate daily tasks to support staff accordingly                                 | 27.5      | 2.4        | 1.6        | 5.7       | 77.8           |
| Offer decision support when necessary                                            | 21.3      | 2.3        | 1.2        | 4.8       | 83.3           |
| Active involvement and or leadership in institutional and work-place committees    | 20.4      | 2.2        | 1.9        | 3.9       | 94.4           |
| Active involvement and or leadership in state and/or national pharmacy associations | 12.9      | 2.1        | 2.1        | 2.9       | 83.3           |
### Domain and Tasks Composite

| Domain and Tasks                                                        | Composite | Importance | Difficulty | Frequency | Responsibility |
|------------------------------------------------------------------------|-----------|------------|------------|-----------|----------------|
| Present or lead a session at local, state, and or national conferences | 7.6       | 2.1        | 2.3        | 2.1       | 66.7           |
| Present or lead a session at interprofessional conferences             | 5.1       | 2.0        | 2.0        | 1.8       | 55.6           |
| Active involvement and or leadership in interprofessional organizations | 4.5       | 1.8        | 1.8        | 2.2       | 50.0           |

*Composite score = [(importance² x frequency) + difficulty] x responsibility

Frequency score: less than annually (1), annually (2), quarterly (3), monthly (4), weekly (5), and daily (6)

Difficulty score: not at all (0), low (1), moderate (2), and high (3)

Responsibility score (as a percentage): no (0) and yes (1)

Importance score: not at all (0), low (1), moderate (2), and high (3)
## Appendix 3. Criteria and Composite Scores (Mean Values) for Tasks in the Bottom Three Domains on the Preceptor Task Inventory Questionnaire

| Domain and Tasks                                                                 | Composite | Importance | Difficulty | Frequency | Responsibility |
|---------------------------------------------------------------------------------|-----------|------------|------------|-----------|----------------|
| **Teaching**                                                                    |           |            |            |           |                |
| Motivate students to be active participants in their education and clinical practice | 42.8      | 2.8        | 2.1        | 5.3       | 100.0          |
| Integrate a mixture of active learning strategies to promote learning engagement  | 32.4      | 2.6        | 1.9        | 4.8       | 94.4           |
| Incorporate multiple teaching formats to accommodate various learning styles (eg, visual, auditory, tactile, etc.) | 30.0      | 2.5        | 1.7        | 4.7       | 94.4           |
| Encourage learners to engage in self-directed learning activities and regulation  | 25.9      | 2.3        | 1.7        | 4.4       | 100.0          |
| Attend activities designed for learners (eg, case presentations, topic discussions, etc.) | 19.5      | 2.5        | 1.4        | 4.2       | 72.2           |
| Assess the learner’s preferred learning style                                    | 19.5      | 2.3        | 1.3        | 4.1       | 88.9           |
| Promote student learning by providing opportunities for mediated failures and methods to improve | 16.8      | 2.4        | 2.2        | 3.7       | 72.2           |
| Engage in self-guided learning of teaching strategies (eg, seek new learning strategies to improve skills) | 12.0      | 2.1        | 2.0        | 2.9       | 77.8           |
| Participate in classroom-based teaching at a school of pharmacy                  | 8.2       | 2.3        | 1.8        | 2.7       | 50.0           |
| Attend courses and workshops on teaching strategies                              | 5.7       | 2.1        | 1.9        | 1.9       | 55.6           |
| Participate in classroom-based teaching in interprofessional settings (eg, non-pharmacy schools) | 3.4       | 2.0        | 1.8        | 2.6       | 27.8           |
| **Clinical Knowledge**                                                           |           |            |            |           |                |
| Solicit feedback from learners for areas of improvement                         | 27.0      | 2.6        | 1.2        | 3.8       | 100.0          |
| Maintain competency in clinical knowledge beyond current practice                | 24.5      | 2.6        | 2.1        | 3.7       | 88.9           |
| Self-reflect during the learner experience for areas of improvement              | 22.0      | 2.4        | 1.5        | 3.9       | 94.4           |
| Seek additional education, experience, and mentoring to refine clinical knowledge and skills | 17.0      | 2.4        | 1.9        | 2.8       | 94.4           |
| Perform periodic self-assessment of precepting techniques                        | 16.4      | 2.4        | 1.7        | 2.7       | 94.4           |
| Develop repositories of clinical resources (eg, digital library of articles, references, etc.) | 15.5      | 2.3        | 1.8        | 3.7       | 72.2           |
| Attend formal clinical knowledge focused continuing education, workshops, and or conferences | 13.7      | 2.4        | 1.9        | 2.5       | 83.3           |
| Incorporate clinical knowledge improvement into continuing professional development (CPD) | 10.5      | 2.3        | 1.8        | 2.8       | 66.7           |
| Maintain board certification to demonstrate clinical knowledge and skills        | 7.8       | 2.2        | 2.2        | 1.9       | 66.7           |
| Document self-assessments and or reflections for monitoring                      | 6.4       | 1.9        | 1.5        | 2.5       | 61.1           |
| **Intrapersonal**                                                               |           |            |            |           |                |
| Perform periodic self-assessment and reflection of precepting techniques for areas of improvement | 29.6      | 2.7        | 2.1        | 3.7       | 100.0          |
| Solicit feedback from learners for areas of improvement                         | 28.0      | 2.6        | 1.1        | 4.1       | 100.0          |
| Review preceptor evaluation and feedback from learners for areas of improvement | 25.0      | 2.7        | 1.1        | 3.5       | 94.4           |
| Practice professional resilience (eg, taking vacation time, scheduling periods off from precepting) | 19.9      | 2.4        | 1.7        | 3.1       | 100.0          |
| Document self-assessments and or reflections for monitoring                      | 12.9      | 2.3        | 1.8        | 3.3       | 66.7           |

(Continued)
## Appendix 3. (Continued)

| Domain and Tasks                                                                 | Composite | Importance | Difficulty | Frequency | Responsibility |
| ---------------------------------------------------------------------------------|-----------|------------|------------|-----------|----------------|
| Work beyond normal and typical duty hours for the purpose of precepting (eg, greater than 40 hours per week) | 12.1      | 1.7        | 1.7        | 4.6       | 77.8           |
| Seek additional education, experience, and mentoring to refine preceptor skills  | 11.5      | 2.1        | 1.6        | 2.5       | 88.9           |
| Incorporate preceptor development needs into continuing professional development (CPD) | 10.5      | 2.2        | 1.6        | 2.1       | 88.9           |
| Attend formal preceptor development continuing education, workshops, and or conferences | 8.6       | 2.1        | 1.5        | 2.1       | 83.3           |
| Receive training in the use of precepting technologies (eg, PharmAcademic, RxPreceptor, etc.) | 4.2       | 1.7        | 1.3        | 1.8       | 66.7           |

* Composite score = [(importance² x frequency) + difficulty] x responsibility  
Frequency score: less than annually (1), annually (2), quarterly (3), monthly (4), weekly (5), and daily (6)  
Difficulty score: not at all (0), low (1), moderate (2), and high (3)  
Responsibility score (as a percentage): no (0) and yes (1)  
Importance score: not at all (0), low (1), moderate (2), and high (3)