



Original article

Evaluating the preceptor–preceptee relationship among Pharm D students at the King Saud University School of Pharmacy

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ABSTRACT

Objective: To evaluate preceptee satisfaction concerning preceptorship and the preceptor–preceptee relationship among pharmacy students.

Methods: A cross-sectional study was conducted from May 2017 to August 2017 on senior Pharm D students at King Saud University (KSU) College of Pharmacy. A survey instrument was used to get feedback from students regarding their clinical rotations and internships and to evaluate their satisfaction toward preceptorship to meet the goals of the curriculum. Data were entered into SPSS, version 24.

Results: Of the 52 students surveyed, 36 (69.2%) were female. More than half of respondents were somewhat satisfied with their preceptors and 11.5% were satisfied. Additionally, only 17% of students rated their preceptors as having excellent clinical teaching skills; about 19% of students rated them as “needs improvement.” About 40% of students rated their preceptors as very good, concerned, competent, and safe in their care for persons living with serious co-morbidities and diseases. About half of students (48.1%) rated their non-faculty KSU preceptors’ teaching behavior as not satisfactory compared with only four respondents with respect to KSU faculty preceptors’ teaching behavior.

Conclusion: Pharm D students were somewhat satisfied with their preceptors’ teaching behaviors in communication skills, practice, and teaching skills as well as feedback and evaluation to students. To enhance the quality of experiential education, preceptors should be trained to develop programs that direct and energize advancement.

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1. Introduction

The concept of “preceptorship” was first introduced in the nursing profession in the early 1970s (Hyrkas et al., 2014) and it has been widely used in postgraduate and undergraduate pharmacy and medical education programs globally (Dibert and Goldenberg, 1995; Letizia and Jennrich, 1998; Usher et al., 1999). The popularity of this program increased during the 1980s and today this model is used by both clinical and medical educational professionals (Hyrkas and Shoemaker, 2007).

Later, the American Association of Colleges of Pharmacy (AACP) recognized preceptor development as a crucial component of quality academic education (Boyle et al., 2002). The University of Maryland School of Pharmacy considered, established, and implemented

the Academy of Preceptors to provide student-based education and skills-oriented learning experiences (Yonge et al., 2002).

Preceptorship is a way to enculturate new employees into their role and to benefit students, or preceptees by instilling confidence in their clinical practice within a specified period of time (1–2 months) (Association, 2004). To facilitate this, a preceptorship program was implemented. An effective preceptorship program provides preceptors with an opportunity to teach, effect practice, and broaden knowledge, and provides successful placements for preceptees as they gain effective confidence in their clinical skills management (Zilembo and Monterosso, 2008).

A preceptor is a well-qualified professional who has experience in supervision, teaching, assessment, and the provision of endless feedback and has completed a preceptorship program (Hyrkas and Shoemaker, 2007). The preceptor serves as a role model, facilitator, liaison, and educator. Preceptorship is particularly useful for senior level and graduate health care students in advanced practice roles (Hyrkas and Shoemaker, 2007).

However, earlier published studies found some challenges to become an effective preceptor: for example, increased work load, lack of required time, and human resources, balancing scientific

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and didactic demands that lead to chances of stress and discomfort with the preceptor role (Carlson et al., 2010; Hilli et al., 2014). In addition, preceptors face the challenge of preceptees that lack knowledge toward learning (Yonge et al., 2002). Collaborative preceptorship, which combines the efforts of both parties (preceptee and preceptor), is important for students to achieve their clinical education goals and is crucial for pharmacy students.

To date, no study has been conducted in Saudi Arabia to evaluate the satisfaction of pharmacy students (preceptees) with respect to practical teaching techniques, and there is no continuous evaluation of knowledge and practical skills of preceptors and preceptees at clinical sites. This is a vital component in the provision of excellent clinical education and to develop a strong and effective clinical pharmacy workforce in Saudi Arabia. Therefore, the objective of this study was to evaluate preceptees satisfaction concerning preceptorship and the preceptor–preceptee relationship among pharmacy students from King Saud University College of Pharmacy, Saudi Arabia.

2. Methods

A cross-sectional study was conducted in King Saud University College of Pharmacy (KSU-COP). A survey instrument was used to get feedback from Pharm D students regarding their clinical rotations and internships and to evaluate their satisfaction toward preceptorship to meet the goals of the curriculum. Senior Pharm D students undertaking experimental clinical rotations in hospital were invited to participate in the study over a four-month period (May 2017–August 2017).

A self-administered questionnaire was adopted from previous (Hyrkas et al., 2014). The questionnaire was designed to evaluate preceptee satisfaction about the preceptor's effectiveness. It was consisted of three parts. First part of the questionnaire related to basic characteristic (i.e. practice sites, number rotations etc.). Second part of the questionnaire consisted of 5 questions to assess the clinical & communication skills development as “excellent”, “very good”, “satisfactory”, and “needs improvement”. Third part includes 6 questions about practice and teaching experience. In this section participants were asked to evaluate their preceptors; practice and teaching experience based on a scale of 1 to 4 where 1 = excellent, 2 = very good, 3 = satisfactory, and 4 = needs improvement. Fourth part composed of 12 questions designed to assess the feedback and evaluation. It involved a closed ended question (yes and no) and a 4 scale (not satisfied at all, somewhat satisfied, satisfied and very satisfied).

2.1. Data analysis

Data were entered into SPSS, version 24 (IBM Corporation, Armonk, NY, USA). Data were analyzed by descriptive statistics and results are displayed as frequencies and percentages.

3. Results

A total of 52 students were surveyed. Of them, 36(69.2%) were female. More than half of respondents (55.8%) reported having worked at 2–4 sites during their internships. Half of respondents had been precepted in 4–6 rotations by faculty of KSU during pharmacy practice. The other half attended the same number of rotations but was precepted by non-faculty of KSU (Table 1).

3.1. Clinical and communication skills development

When students were asked to rank their preceptors regarding the clinical, environmental and patient/client needs, about 34% of

Table 1
Basic characteristics of the participants.

Questions	Answers	Frequency (%)
Gender	Male	16 (30.8)
	Female	36 (69.2)
Number of sites where you performed your internship year	One site	2 (3.8)
	2–4 sites	29 (55.8)
	5–6 sites	12 (23.1)
	>6 sites	9 (17.3)
How many rotations were precepted by a faculty member of KSU-COP?	None	1 (1.9)
	1–3	20 (38.5)
	4–6	26 (50.0)
	7–10	5 (9.6)
How many rotations were precepted by a non-faculty member of KSU-COP?	None	1 (1.9)
	1–3	10 (19.2)
	4–6	27 (51.9)
	7–10	14 (26.9)

Abbreviation: KSU-COP, King Saud University College of Pharmacy.

Table 2
Assessment of preceptors in clinical and communication skills development.

Questions	Answers	Frequency (%)
Made me feel welcome	Excellent	3 (5.8)
	Very good	25 (48.1)
	Satisfactory	16 (30.8)
	Needs improvement	7 (13.5)
Identified my previous knowledge and skills, and set goals with me for further development	Excellent	6 (11.5)
	Very good	17 (32.7)
	Satisfactory	18 (34.6)
	Needs improvement	11 (21.2)
Had a good knowledge of the clinical, environmental, and patient/client needs, and helped me understand and develop my skills	Excellent	8 (15.4)
	Very good	16 (30.8)
	Satisfactory	21 (40.4)
	Needs improvement	7 (13.5)
Was approachable and communicated clearly	Excellent	8 (15.4)
	Very good	20 (38.5)
	Satisfactory	16 (30.8)
	Needs improvement	8 (15.4)
Assisted me in identifying others who could support my learning	Excellent	4 (7.7)
	Very good	10 (19.2)
	Satisfactory	24 (46.2)
	Needs improvement	14 (26.9)

respondents rated their preceptor as satisfactory, and 21.1% as needs improvements. Only 5.8% of respondents rated their preceptors about “made me feel welcome” as excellent. More ratings on the communication skills of preceptors are listed in Table 2.

3.2. Practice and teaching

When students were asked to rank their preceptors on effective clinical teaching skills, about 19% of students rated them as “needs improvement.” For confidence in utilizing clinical situations to assist student learning, approximately 17% of students rated their preceptors as excellent, 30.8% as very good, 32.7% as satisfactory, and 19.2% as needs improvement. For knowledge of practice and patient/client centered care, 40.4% of respondents rated their preceptors as satisfactory, and 11.5% as needs improvement. About 40% of students rated their preceptors as very good, concerned, competent, and safe in their care for persons living with serious

Table 3
Assessment of preceptors in practice and teaching experience.

Items	Answers	Frequency (%)
Used effective clinical teaching skills	Excellent	4 (7.7)
	Very good	19 (36.5)
	Satisfactory	19 (36.5)
	Needs improvement	10 (19.2)
Confident in utilizing clinical situations to assist my learning	Excellent	9 (17.3)
	Very good	16 (30.8)
	Satisfactory	17 (32.7)
	Needs improvement	10 (19.2)
Role modeled professional practice and patient/client-centered care	Excellent	7 (13.5)
	Very good	18 (34.6)
	Satisfactory	21 (40.4)
	Needs improvement	6 (11.5)
Demonstrated competent and safe care for persons living with serious co-morbidity and diseases	Excellent	6 (11.5)
	Very good	21 (40.4)
	Satisfactory	22 (42.3)
	Needs improvement	3 (5.8)
Advanced my development by creating learning opportunities	Excellent	6 (11.5)
	Very good	17 (32.7)
	Satisfactory	23 (44.2)
	Needs improvement	6 (11.5)
Provided a safe learning environment/relationship ^a	Excellent	9 (17.3)
	Very good	19 (36.5)
	Satisfactory	16 (30.8)
	Needs improvement	7 (13.5)

^a Missing data.

co-morbidity and diseases. More ratings on all practice and teaching items are listed in [Table 3](#).

3.3. Feedback and evaluation of preceptors

About half of students (48.1%) rated their non-KSU faculty preceptors' teaching behavior as not satisfactory compared with only four respondents with respect to KSU faculty preceptors' teaching behavior. In the area of accessibility of preceptors, more than half of students rated their preceptors as somewhat satisfactory and 11.5% as satisfactory. About 42% of students ranked their preceptors as very good, concerned preceptors those are evaluated students' knowledge, skills, and understanding by seeking feedback and participation.

Students reported the following when asked for feedback about their preceptors: knowledgeable (84.6%), likes to teach (57.7%), supportive (51.9%), provide frequent feedback (44.2%), gives context to future practice (40.4%), and approachable (38.5%) (see [Table 4](#)).

4. Discussion

Clinical preceptors should offer a safe environment for interns, let students make inquiries arising from their internship, and share knowledge with interns as well as well give appropriate instruction on learning styles ([Balas et al., 2012](#)). Overall, this study revealed that students were somewhat satisfied with their clinical preceptors with respect to clinical and communication skills development. However, this study found that less than half of students rated their preceptors regarding the clinical environment and patient/client needs as satisfactory. This finding is consistent with the results of a previous study conducted in Thailand where about

Table 4
Assessment of preceptors in feedback and evaluation.

Items	Answers	Frequency (%)
Experience with KSU-college of pharmacy faculty	Not satisfied at all	4 (7.7)
	Somewhat satisfied	11 (12.2)
	Satisfied	19 (36.5)
	Very satisfied	18 (34.6)
Your experience with non-KSU faculty	Not satisfied at all	25 (48.1)
	Somewhat satisfied	22 (42.3)
	Satisfied	5 (9.6)
	Very satisfied	–
Spending sufficient time with students and regularly maintain contact with them	Not satisfied at all	18 (34.6)
	Somewhat satisfied	28 (53.8)
	Satisfied	6 (11.5)
	Very satisfied	–
Evaluated my knowledge, skills, and understanding by seeking feedback and participation	Excellent	5 (9.6)
	Very good	22 (42.3)
	Satisfactory	19 (36.5)
	Needs improvement	6 (11.5)
Offered regular, specific, and constructive feedback	Excellent	7 (13.5)
	Very good	18 (34.6)
	Satisfactory	21 (40.4)
	Needs improvement	6 (11.5)
Supportive	Yes	27 (51.9)
	No	25 (48.1)
Approachable	Yes	20 (38.5)
	No	32 (61.5)
Likes to teach	Yes	30 (57.7)
	No	22 (42.3)
Knowledgeable	Yes	44 (84.6)
	No	8 (15.4)
Provided frequent feedback	Yes	23 (44.2)
	No	29 (55.8)
Gave context to future practice	Yes	21 (40.4)
	No	31 (59.1)
Performed a pre-rotation assessment	Yes	17 (32.7)
	No	35 (67.3)

60% of Pharm D students reported that their preceptors clarified their activities and decision-making in patient management, and 44.7% of clinical preceptors showed their presentations in an appropriate way ([Sonthisombat, 2008](#)). Currently, no particular preceptor training program addresses good communication skills. However, preceptors should be supported by the university through an effective communication process to help them manage serious difficulties. The university communication can offer a reward and acknowledge preceptors who take an active interest in students through their readiness to participate in these discussions ([Fejzic et al., 2013](#)).

Many studies have shown that the best clinical preceptors have teaching knowledge ([Okoronkwo et al., 2013](#); [Talwar and Weilin, 2005](#)). A study was carried out in Saudi Arabia on the “determinants of effective clinical learning reported that undergraduate students expected receptors to have certain teaching skills to encourage student learning in the clinical setting ([AlHaqwi et al., 2010](#)). Moreover, it is concluded from these studies that without prior clinical teaching training, no clinical preceptors can be really successful ([Okoronkwo et al., 2013](#)).

This study revealed that the perceptions of Pharm D students toward the practice and teaching skills of their preceptors varied among respondents. In general, students were fairly satisfied with their preceptors' teaching skills. For instance, 40.4% of respondents rated their preceptors as satisfactory and 11.5% as needs improvement toward knowledge of clinical, environmental, and patient/client needs and helping students understand and develop their skills. This finding is lower than the finding of a previous study

conducted in Thailand that reported that about two-thirds of Pharm D students were in agreement with preceptors having adequate knowledge for the management of patients in the clinical setting (Sonthisombat, 2008). In addition, this study found that less than half of students were in agreement that preceptors used effective clinical teaching skills, which differs from the Thai study that found 60% of Pharm D students were satisfied with their clinical preceptors' effective clinical teaching skills. This difference could be related to many reasons. First, the most of the preceptors in hospitals settings are not from the university staff and besides their clinical duties they work as preceptors for students. Thus, they did not have adequate time to contact with the students and spend some time to know whether the students meet their needs. Second, there is not enough clinical pharmacists at Saudi university as well as in hospitals. However, a lot of clinical pharmacists are still studying Pharm D programs overseas and are expected to return after completion of their programs in the near future. Third, some preceptors are busy with research and publishing, which are extremely encouraged at certain organizations (Al-jedai et al., 2016).

This study found that 42.3% of respondents were satisfied with their clinical preceptors' knowledge and skills. This indicates that students have a low level of satisfaction with their had a low level of satisfaction with their preceptors' feedback to students. Providing feedback is considered as a vital role for preceptors. Effective feedback is regular, timely, related to specific observed student behaviors, provided with respect toward the student, and makes a plan for self-improvement (Salerno et al., 2002). For students to develop and enhance their aptitudes, they have to recognize what they are doing admirably and also where they have to make strides. As clinical teachers, preceptors should provide progressive input. Effective assessment likewise enables a student to evaluate his or her qualities and shortcomings, recognize methodologies for development, and proceed with proficient development and improvement. A study conducted in Canada reported that 95.6% of medical students thought that feedback was vital for learning (Schultz et al., 2004). However the result of the preceptors' feedback is comparable with the study among Pharm D students to assess their perception of preceptors' teaching behaviors found that preceptors were, for the most part, evaluated least on their feedback to students (Sonthisombat, 2008). Clinical preceptors have the duty to detect and lead change in pharmacy practice. Therefore, students' input is vital to enable universities and schools to recognize areas in which preceptors require change and the level of accentuation of these skills needed to help preceptors become better instructors (Sonthisombat, 2008).

The program needs to give preceptors the opportunity to control exchanges, empower understudies, display self-intelligent conduct, esteem understudy self-appraisal, and give criticism on the understudies' appearance. Studies have shown that preceptors can determine how to be successful teachers (Furney et al., 2001; Huang and Monteiro, 2000; Sonthisombat, 2008). For instance, a short continuing education program in the form of workshops was conducted among medical preceptors (Salerno et al., 2002). After the workshops, students were asked to evaluate their preceptors and it was shown that feedback to students by their medical preceptors was significantly increased from 17% to 22%. In addition, after the workshops, preceptors revealed that they were better at giving the students a chance to reach their own particular decisions (before: 26%; after: 16% 26%) and at assessing the students increased significantly after the workshop from 16% to 21% (Salerno et al., 2002).

The results of this study should be interpreted with caution due the fact that it was conducted in a single university. Thus, the results cannot be generalized beyond this sample. However, the findings can be utilized as an indicator in the appointment and assessment of future clinical preceptors. Further studies are

mandatory to discover other factors which may influence the preceptor–preceptee relationship of intern pharmacists.

5. Conclusion

The results showed that Pharm D students were somewhat satisfied with their preceptors' teaching behaviors in communication skills, practice, and teaching skills as well as feedback and evaluation to students. To enhance the quality of experiential education, preceptors should be trained to develop programs that direct and energize advancement. We should also make students mindful of their obligation to get input and assessment from preceptors because these are fundamental to accomplishing the educational objectives. Additionally, more residency-trained clinical pharmacists in both academic and hospitals setting are required.

Conflict of interests

The author declare that there is no conflict of interests regarding the publication of this paper.

Disclaimers

None.

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References

- Al-jedai, A., Qaisi, S., Al-meman, A., 2016. Pharmacy practice and the health care system in Saudi Arabia. *CJHP* 69 (3), 231.
- AlHaqwi, A.L., van der Molen, H.T., Schmidt, H., Magzoub, M., 2010. Determinants of effective clinical learning: a student and teacher perspective in Saudi Arabia. *Educ. Health* 23 (2), 369.
- Association, C.N., 2004. Achieving excellence in professional practice: a guide to preceptorship and mentoring. Canadian Nurses Association = Association des infirmières et infirmiers du Canada.
- Balas, M.C., Casey, C.M., Happ, M.B., 2012. Assessing and managing critically ill older adults: resources for educators and clinicians. *J. Gerontol. Nurs.* 36 (7), 27–35.
- Boyle, C.J., Carr-Lopez, S., Kawahara, N.E., Kieser, M.A., See, C.J., Smith, G.B., 2002. Report of the preceptor development task force subcommittee two. *Am. J. Pharm. Educ.* 66 (4), 425–435.
- Carlson, E., Pilhammar, E., Wann-Hansson, C., 2010. Time to precept: supportive and limiting conditions for precepting nurses. *J. Adv. Nurs.* 66 (2), 432–441.
- Dibert, C., Goldenberg, D., 1995. Preceptors' perceptions of benefits, rewards, supports and commitment to the preceptor role. *J. Adv. Nurs.* 21 (6), 1144–1151.
- Fejzic, J., Henderson, A., Smith, N.A., Mey, A., 2013. Community pharmacy experiential placement: comparison of preceptor and student perspectives in an Australian postgraduate pharmacy programme. *Pharm. Educ.*, 13.
- Furney, S.L., Orsini, A.N., Orsetti, K.E., Stern, D.T., Gruppen, L.D., Irby, D.M., 2001. Teaching the one-minute preceptor. *J. Gen. Intern. Med.* 16 (9), 620–624.
- Hilli, Y., Melender, H.-L., Salmu, M., Jonsén, E., 2014. Being a preceptor—a Nordic qualitative study. *Nurse Educ. Today* 34 (12), 1420–1424.
- Huang, W.Y., Monteiro, F., 2000. Teaching behaviors used by community-based preceptors for a family and community medicine clerkship. *Fam. Med.* 32 (10), 678.
- Hyrkas, E.K., Linscott, D.A., Rhudy Jr, J.P., 2014. Evaluating preceptors' and preceptees' satisfaction concerning preceptorship and the preceptor–preceptee relationship. *J. Nurs. Educ. Pract.* 4 (4), 120.
- Hyrkäs, K., Shoemaker, M., 2007. Changes in the preceptor role: re-visiting preceptors' perceptions of benefits, rewards, support and commitment to the role. *J. Adv. Nurs.* 60 (5), 513–524.
- Letizia, M., Jennrich, J., 1998. A review of preceptorship in undergraduate nursing education: implications for staff development. *J. Contin. Educ. Nurs.* 29 (5), 211–216.
- Okoronkwo, I.L., Onyia-Pat, J.-L., Agbo, M.-A.E., Okpala, P.U., Ndu, A.C., 2013. Students' perception of effective clinical teaching and teacher behaviour. *Open. J. Nurs.* 3 (01), 63.

- Salerno, S.M., O'malley, P.G., Pangaro, L.N., Wheeler, G.A., Moores, L.K., Jackson, J.L., 2002. Faculty development seminars based on the one-minute preceptor improve feedback in the ambulatory setting. *J. Gen. Intern. Med.* 17 (10), 779–787.
- Schultz, K.W., Kirby, J., Delva, D., Godwin, M., Verma, S., Birtwhistle, R., Knapper, C., Seguin, R., 2004. Medical students' and residents' preferred site characteristics and preceptor behaviours for learning in the ambulatory setting: a cross-sectional survey. *BMC. Med. Edu.* 4 (1), 12.
- Sonthisombat, P., 2008. Pharmacy student and preceptor perceptions of preceptor teaching behaviors. *Am. J. Pharm. Ed.* 72 (5), 110.
- Talwar, D., Weilin, S., 2005. Qualities of an effective teacher: the dental faculty perspective. *J. Dent. Educ.* 69 (2), 116.
- Usher, K., Nolan, C., Reser, P., Owens, J., Tollefson, J., 1999. An exploration of the preceptor role: preceptors' perceptions of benefits, rewards, supports and commitment to the preceptor role. *J. Adv. Nurs.* 29 (2), 506–514.
- Yonge, O., Krahn, H., Trojan, L., Reid, D., Haase, M., 2002. Supporting preceptors. *J. Nurses Prof. Dev.* 18 (2), 73–77.
- Zilembo, M., Monterosso, L., 2008. Towards a conceptual framework for preceptorship in the clinical education of undergraduate nursing students. *Contemp. Nurse* 30 (1), 89–94.