ORIGINAL RESEARCH

Developing nurse preceptor competency domain guide tool: A Delphi study

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ABSTRACT

Background and objective: One of the strategies used to prepare novice nurses for their professional journeys in clinical practice is by implementing the preceptorship teaching and learning model. Competencies such as knowledge, experience, abilities, and attributes need to be measured to ensure the desired outcomes of the preceptorship are achieved and consistent. This study aimed to develop a nurse preceptor competency domain guide tool at a tertiary hospital in Oman.
Methods: Three-round Delphi iterative design with experts was used to develop the nurse preceptor competency domain guide tool. Following standard measures, eight expert opinions were combined until a group consensus was achieved. The level of consensus within the expert panel was defined as $\geq 75\%$ scoring of items were selected as an essential required competency/item.
Results: Eight experts from a main tertiary hospital were included in the panel. Five core competency domains and five subdomains were identified and considered to be relevant for nurse preceptors at the hospital with consensus levels varying from 75% to 100%. A total of 83 descriptive items were identified for the competency guide tool.
Conclusions: This study found that the main core competency domains of the tool that nurse preceptors should acquire to be competent preceptors are inter-professional communication skills, appropriate teaching strategies, time management skills, building a learning atmosphere, and coaching critical thinking. This tool would improve nurse preceptors' performance and equip them with the required prerequisite competencies to professionally start their journey in clinical practices. Follow-up research on tool implementation is highly recommended to evaluate its effectiveness.

Key Words: Nurse preceptor, Novice nurse, Nurse intern, Clinical setting, Competency, Guiding tool, Preceptor skills

1. INTRODUCTION

Novice nurses (nurse interns) need continuous guidance and support as they start clinical practice. One of the common strategies to prepare the novice nurses for their professional journeys is by using the preceptorship teaching and learning model.[1] It is acknowledged that the success of a preceptorship program depends greatly on the competence of the preceptors as well as their willingness to take responsibility for the preceptor's role.[2] Yet, with the varied scope of supervisory preceptorship roles, maintaining precpetors' competencies becomes challenging.

Several studies reported that preceptors are inadequately prepared for their supervisory role due to being overwhelmed with clinical roles and other job-related responsibilities.[3–5] As a result, the preceptor might become stressed to complete the program requirements including progress documentation. Furthermore, hospital management might have excessive expectations from the preceptor to provide successful education,

socialization, and role modelling whereas the initial education on how to be effective preceptors is compromised.[5] Therefore, the development of a nurse preceptor competence domain guide tool is crucial to offer support for the preceptors and to develop their skills and abilities to precept others. Bartlett et al.[6] and Wray et al.[7] reported that development and support given to preceptors may lead to improvements in retention and satisfaction of nurse interns.

According to Australia TPS,[8] competencies include a combination of knowledge, experience, abilities and attributes. For a preceptorship program to be consistent, these competencies need to be clear, well-structured and regularly measured to ensure achievement of desired outcomes.[6] Lee-Hsieh et al.[9] created Clinical Teaching Behavior Inventory (CTBI) that contains certain domains. These competency domains are; 1) committing to teaching, 2) building a learning atmosphere, 3) using appropriate teaching strategies, 4) guiding inter-professional communication, 5) providing feedback and evaluation, and 6) showing concern and support. Based on the CTBI, this study aims to develop a nurse preceptor competency domain guide tool for a tertiary hospital using the Delphi method.

2. METHODOLOGY

2.1 Study design
The Delphi method is a well-grounded technique to establish consensus. It is characterized by multiple rounds with a panel of experts. The group responds to a questionnaire by scoring questionnaire items in terms of importance or the level of agreement.[10] In this study, a three-round Delphi iterative design with experts was used to develop the preceptors' com-

petency domain guide tool. Following standard measures, expert opinions were combined, summarized and shared with the panel in the next rounds and until group consensus was achieved.[10]

2.2 Participants
To develop the main core competencies of nurse preceptors, participation was sought from a panel of mixed senior expert preceptors with expectation that each participant will provide unique and rich information of value to achieve the objectives of this study. These experts fit the profile of being 'ideal' preceptors as they were previously rated as excellent preceptors by their preceptee.

Since there is no clear guidance on optimal sample size for the Delphi group,[10] non-probability purposive sampling was used to recruit the panel of experts. The finalized panel consisted of eight participants who are treating as an identical group since they share the same "nursing" fundamentals. More information about the expert panel is available in Table 1.

2.3 Questionnaire development
Preceptors' competency domain guide tool was structured by the main author from literature. The criteria of preceptors based on the national internship nursing program were also used. An initial meeting with all preceptors was conducted during which the roles were developed and grouped under certain competencies. The tool consists of five domains, three subdomains, and 62 elements that describe each domain and sub-domain. This tool then was transferred to an online survey for distribution.

Table 1. Information about expert panel

Expert Type	Number of Participants	Qualification	Experience Description
Senior clinical educator	1	Post-graduate certification	Extensive experience in clinical education
Nurse researcher	1	Master degrees in related disciplines	Extensive research background in nursing sciences
Nurse manager	1	Master degree in a related discipline	Senior decision-making roles
Nursing human resource staff	2	Post graduates diploma in human resource	Planning and supervising national internship program, as well as preceptorship workshops
Representative of training and studies department	1	Master degree in medical education	Managing training programs of preceptors and preceptee

This study was conducted at a tertiary hospital from February 2020 till September 2020. The Delphi method was utilized in a three-round process. The first round aimed to rate the importance of a set of pre-determined domains, subdomains, and elements. Furthermore, it aimed to add other domains, sub-domains, or descriptions based on literature and discussions. A link to the online format of the preceptor competency domains tool was shared with the expert panel. A five-point Likert scale was used to rate the importance of each domain as it is proven that they are mutually exclusive and collectively exhaustive.[11] The panel rated the tool based on the importance of each element of the competence guide using a 1-5 scale, where 5 indicates very important, 4 important, 3 neutral (so-so), 2 less important, and 1 not important. The panel was also requested to add any other domains they perceive important with their statements.

The importance scale was placed below each domain and sub-domain to encourage the expert panel to consider each statement individually.[12] There is no universal literature agreement on the acceptable level of consensus. According to du Plessis,[13] the consensus depends on the aim of the research, the sample size and resources. In this study, the researchers decided that statements with importance level of 75% and above will be considered forward for the second round.

In the second round, more focus was on the newly added statements based on the level of importance and the flow of each domain and statement. The results of the first round (those with 75% and above agreement of importance) and the added statements were shared with the panel. The panel was asked to rate the newly added domains using a 1-5 scale based on their importance and consider the sequence of each domain with its descriptions. An online link was shared with them to provide their feedback. However, this round did not provide the participants with the option of adding their comments or insights.

Testing the feasibility, readability, and revision of the content was done in the third and final round. An online link was shared with the panel to provide their feedback on the feasibility of each domain. This was done using three nominal measures; yes, no, or not sure. The panel was also asked to suggest alternative phrases to replace the domains and subdomains or their descriptions. Feedback on this round was communicated with the panel for confirmation.

2.4 Data Analysis

Descriptive statistics such as frequencies and percentages were used to summarize the results of Delphi iterative rounds. The level of consensus within the expert panel was defined as $\geq$ 75% and above.[14] Qualitative analysis of the third round was transformed into themes. More specifically, themes were transformed by adding the description of each author independently. Then they were combined and translated into competency domains, sub- domains and item descriptions. Finally, these themes were sent back to the panel for overall agreement.

2.5 Ethical consideration

Ethical approval was granted by the Scientific Research Committee at the tertiary hospital in Oman. The approval number is SRC#3/2020. All participants were provided verbal information about the research aim, and details of requirements. Participants were assured of complete confidentiality and anonymity. All the panel members have sufficient knowledge about the Delphi method, and therefore no training was required.

3. RESULTS

Round 1: Analysis of the first round rendered 82 items from 78 of the initial tool. One added core competency domain is time management skill with 10 descriptive items. However, 4 descriptive items were deleted since they scored below 75% consensus of agreement. A total of five core competency domains and five sub-competencies domains were identified for the first round.

Round 2: The added core competency domain from the first round received 75% agreement. In addition, eight descriptive items for the added core competency domain reached a consensus of more than 75%. However, two descriptive items received consensus below 75% and therefore were deleted. Six descriptive items were added under different competency domains. Five of them reached more than 75% of agreement on their importance; and consequently, one descriptive item was deleted. The panel reached an agreement on the sequence of each competency domain, sub-competency domains and statements.

Round 3: the expert panel rated the feasibility of each competency domain and their descriptive items. The panel also suggested alternative phrases to make them clear for the preceptors. Table 2 displays the suggested sequence and level of importance of each descriptive item. Five main competency domains and five subdomains were identified as relevant for nurse preceptors with consensus levels varying from 75% to 100%. A total of 83 description items were identified for the competency domain guide tool.

In overall, guiding novice nurses to develop interprofessional communication skills had the first sequence according to the panel with a 100% rate of importance, feasibility and applicability. Despite considering coaching critical thinking as 100% important, it had the fifth sequence of domains according to the panel and a 75% feasibility/applicability rate.

4. DISCUSSION

To our knowledge, this is the first study that identifies the core competency domains of nurse preceptors in a clinical setting and discusses steps/activities of achieving them. Previous studies have recognized preceptors' roles and responsibilities with nursing students.[15] This study revealed five major domains in the competency domain guide tool required by the nurse preceptor. These domains are; guiding novice nurses to develop inter-professional communication skills, appropriate teaching strategies, time management skills, building a learning atmosphere, and coaching critical thinking. The finalized version of the nurse preceptor competency domain guide tool is shown in Figure 1.

Table 2. The suggested sequence and level of importance of each descriptive item

	Domain/sub-domain	Rate of importance	The sequence of the domain according to the panel	Feasibility/ applicability %	Comments of the phrases
Domains	Guide novice nurses to develop interprofessional Communication skills	100%	First	100%	Suggested change of the phrase
	Appropriate teaching strategies	100%	Second	75%	Statement is clear
	Time Management Skills	75%	Third	87.5%	Statement is clear
	Build a learning atmosphere	87.5%	Fourth	75%	Statement is clear
	Coaching critical thinking	100%	Fifth	75%	Statement is clear
Sub-domains	Novice nurse performance assessment technique*	100%	Second	100%	Statement is clear
	Evaluation & feedback of the novice nurse	100%	Fifth	100%	Statement is clear
	Setting goals and individual learning needs	100%	First	100%	Statement is clear
	Teaching strategies	75%	Third	75%	Statement is clear
	Demonstration of organized knowledge	75%	Fourth	75%	Statement is clear

*Initially it was domain three and then suggested to be merged
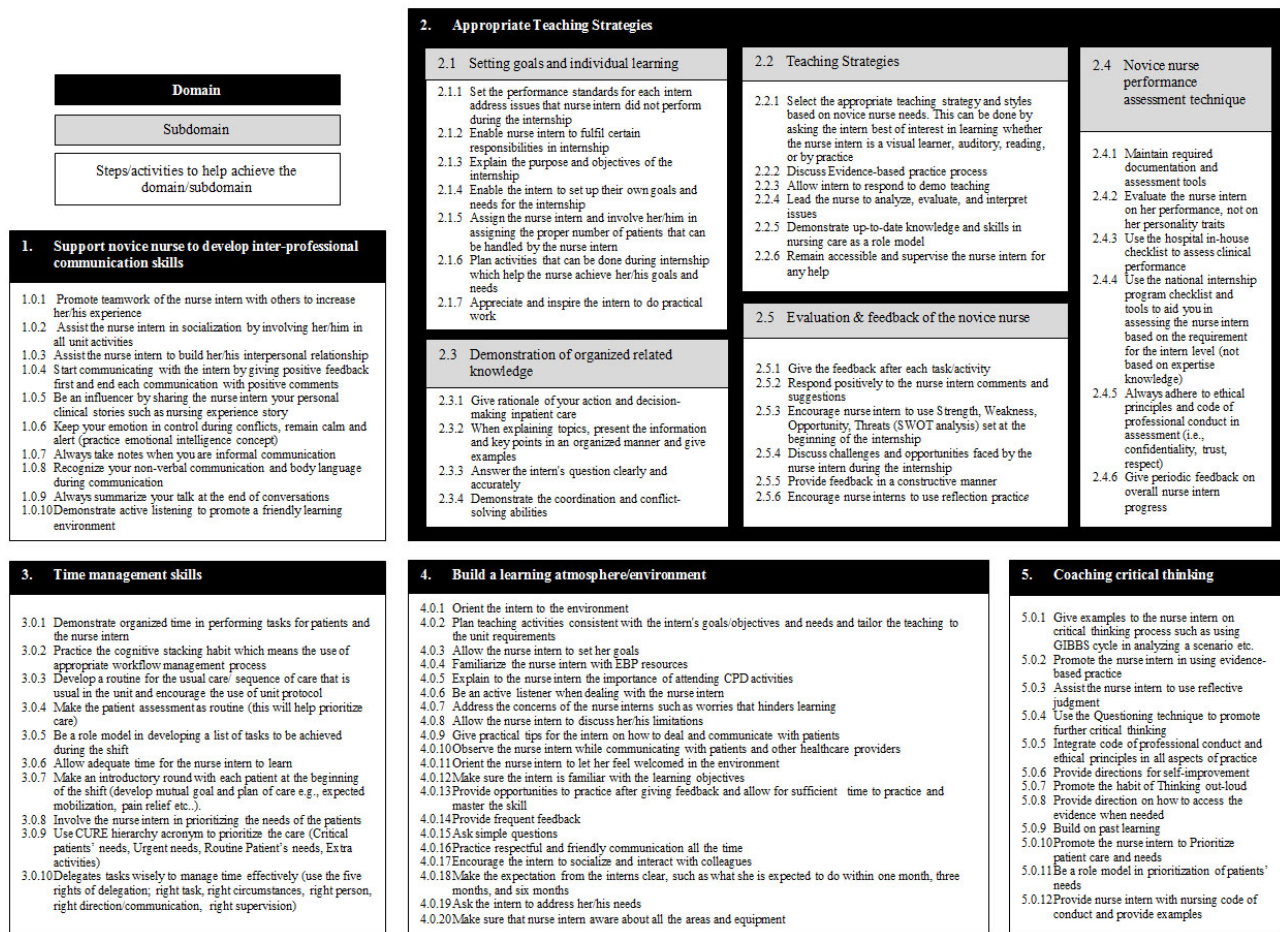
Figure 1. Nurse preceptor competency domain guide tool

4.1 Effective interprofessional communication

Under this domain, preceptors need to assist nurse interns to effectively communicate with other healthcare providers, patients and relatives. As recommended by the study panel, interprofessional communication can be promoted by implementing and promoting team working skills. Teamwork enriches the nurse intern experience in working with others. This is a critical element as the nurse is required to work with a multidisciplinary team to meet patients' needs and provide optimum care. Teamwork is proven to improve the quality of care and enhance patient safety as supported by Omer et al.[15] Moreover, based on the organization goal related to patient safety, the panel emphasized that teamwork is a crucial skill for the preceptee to acquire throughout the internship program. It also helps to maximize individuals' strengths and overcome their weaknesses to achieve the team common goal.

To be effective in a clinical practice, nurse interns need to build interpersonal relationship skills. The panel agreed that the preceptor, as well as the preceptee, need to work together on achieving good interpersonal relationship skills. As supported by Hong et al.[16] and Lapeña-Moñux,[17] this strategy is essential for the nurse interns to feel content in the work environment and be more confident and satisfied in their work. It is also vital that preceptors provide the nurse inters with well-structured and positive feedback before and at the end of each communication. This strategy will help them to learn faster and effectively contribute to their teams. Omer et al.[15] reported that constructive feedback encourages the nurse interns to improve their knowledge.

The study panel suggested other strategies that preceptors need to follow to improve interprofessional communication of nurse interns. These include focusing on the preceptors' emotional intelligence and preceptor's nonverbal communication such as body language and eye contact. Bambaeeroo and Shokrpour[18] emphasized that nonverbal communication can cause a positive effect on the teaching and learning process. Therefore, preceptors are required to give a special attention to these skills. Moreover, it is also important that the preceptors summarize their discussions with the nurse inters. This will ensure having full understanding of the discussion and avoid missing important information. The expert panel also agreed that the preceptors need to influence the nurse interns by sharing their clinical scenarios, such as nursing experience stories. These steps allow the preceptors to establish a good relationship with the nurse inters and show empathy.

4.2 Appropriate teaching strategies

This domain describes the strategies that preceptors should use to help novice nurses learn the required skills, knowledge, and behaviour. The expert panel agreed that effective teaching strategies are essential building preceptors' competencies and identified five subdomains to achieve this. First and foremost, the preceptors need to work closely with preceptees to properly plan for preceptorships by setting achievable goals and individual learning objectives. Special focus should be given to the appropriate number of patients that the preceptees can handle so that they provide safe care for the patient.[19]

Secondly, preceptors should use innovative and attractive teaching strategies to stimulate the learning process. Phillips and Vinten[20] emphasized that preceptors should become facilitators of learning rather than lecturers. Due to the dynamic and challenging nature of the clinical setting, the study panel suggested to use practical oriented teaching strategies. These include questioning, role-playing, simulation, case studies, Problem Based Learning (PBL) and debating. These methods can help in improving the nurse intern knowledge, skills, and attitudes.[20] During preceptorships, the preceptors should also give special attention to their demonstration of related knowledge and practice. In specific, they should give rationale of their actions, present information in organized manners, provide clear and accurate responses to preceptee's questions, and have conflict solving abilities.

The study found that preceptors need to use performance assessment techniques. Based on the national internship program requirements, the study panel concluded that the preceptors are strongly required to adhere to the hospital competency checklist. The panel also agreed that the nursing code of conduct in assessing the nursing ethical principles is a core requirement. Moreover, the preceptors should provide preceptees with periodic evaluation and feedback. Hsu et al.[21] emphasizes that providing feedback based on tasks and activities helps the novice nurses to focus on specific task achievement and stimulate a culture of continuous improvement. As it was evident that chance of making error is high during preceptorships, the study panel strictly emphasized that preceptors need to be available and accessible to supervise the preceptees when needed.

4.3 Time management skills

Time management skills are critical job requirements especially in clinical settings. Unsurprisingly, it is a domain in the competency guide tool. To be effective in time management, it is recommended that preceptors teach novice nurses the cognitive staking process in a clinical setting.[22] The research panel agreed that the preceptors need to develop pre-

ceptee's skills in conducting daily routine nursing tasks. The panel also recommended that the preceptors should encourage the novice interns to effectively prioritize their nursing tasks through using, for example, CURE (Critical, Urgent, Routine and Extra) hierarchy. Carvalho et al.[23] emphasized that prioritizing ability and mindfulness are skills of time management. This, therefore, will safeguard the transition of the novice nurse from being a competent qualified nurse to a proficient nurse.

4.4 Building a learning atmosphere

Competencies of novice nurses is progressively developed by practicing nursing skills in a healthy and supportive learning atmosphere.[24] The study found that the preceptors' support to preceptees is as a significant factor that influences the learning process. Subsequently, a healthy atmosphere may lead to retention of the novice nurses in the service. Aboshaiqah and Qasim[25] stated that the approachable attitude and trustworthiness of the preceptors are essential qualities for creating a positive learning atmosphere. From this perspective, the expert panel encouraged the preceptors to orient the novice nurses to the work environment, familiarize them with available resources, be an active listener, and provide frequent feedback. Omer et al.[15] emphasized that the use of constructive feedback helps the novice nurses to build their competencies. These elements of building a positive relationship are critical elements for building a learning atmosphere.

4.5 Coaching critical thinking

The last domain in the proposed competency guide tool is coaching critical thinking. This domain emphasizes the need to educate novice nurses on how to think critically and rely on critical thinking in making decisions. The study found that preceptors should use real-life scenarios on critical thinking processes using different models such as Gibb's cycle and reflective judgment in analyzing different scenarios. The panel used these two strategies in promoting critical thinking since it is one of the requirements of the National Internship Program (NIP). This program was designed by the Ministry of Health and used by institutions nationally. The program requires novice nurses to write Gibb's reflection and reflective judgment at least once throughout the internship period. The panel agreed that reflective thinking will encourage the novice nurses to use questioning strategy to enhance the thinking process. Schuelke et al.,[26] Cui et al.[27] and Forneris et al.[28] argued that concept mapping and reflective thinking empower the nurses to be active in their learning process, and allow them to justify the rationale behind actions. The panel also recommended using evidence-based practice, thinking loud approach, and/or building on past learning experiences to drive critical thinking. The use of evidence-based practice in nursing can enhance critical thinking and promote questioning habit during clinical practice.[27] Wu et al.[29] emphasized that thinking out loud and dialogue strategy helps the nurse to be more intentional and reflective.

Task prioritization is crucial in clinical settings. This study there stressed the urgent need that preceptors not just be a role model in task prioritization according to patient needs, but also to coach novice nurses to effective doing it. This can be done by giving directions on accomplishing important patient care, routine tasks, and procedures.[28]

Clinical situations are continuously changing, therefore; it is important to enhance novices' problem-solving techniques and boost their confidence. This can be achieved through transformational abilities, preceptors' teaching competency, role modelling, and highlighted clinical competencies.[29]

5. CONCLUSION

This study discussed the nurse preceptor competency domain guide tool. The study suggests that this tool should contain five main core competency domains that nurse preceptors should acquire to be competent preceptors. These domains were identified based on institution requirements as well as National Internship Program requirements. These competency domains are; 1) guiding novice nurses to develop interprofessional communication skills, 2) appropriate teaching strategies, 3) time management skills, 4) building a learning atmosphere, and 5) coaching critical thinking. Under each of these domains, the study panel of experts identified certain tasks/activities and strategies that nurse preceptors could use to facilitate their role. It is expected that this tool would assist preceptors during preceptorship programs to equip novice nurses with the required prerequisite competencies to professionally start their journey in clinical practices. This unique tool adds to the existing knowledge about the preceptor roles in clinical education. The tool can guide the preceptors on the essential skills while supervising novice nurses. Moreover, any new preceptor could find this tool as an easy reference to facilitate their role requirements. In overall, this tool can be used as a guide in structuring preceptorship workshops.

However, this study is limited by the sample size and sampling design which limit the generalization of the findings. Further studies are recommended to test the validity and feasibility of the tool in different institutions with larger sample size.

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CONFLICTS OF INTEREST DISCLOSURE

The authors declare that they have no competing interests.

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