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Original Research Article

Effectiveness of clinical teaching practices of preceptors in three referral hospitals at Stung Treng Region, Cambodia

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ABSTRACT

Background: Students are not mere followers of teacher instructions, but fully aware and very observant of what differentiates a good clinical preceptor from a poor clinical preceptor and have expectations of how preceptors and clinical teachers should act. This study describes students' perceptions on the effectiveness of clinical teaching practices of preceptors.
Methods: A cross-sectional survey was conducted by using the Clinical Teaching Evaluation (CTE) Questionnaire to determine the level of effective clinical teaching by preceptors in the following areas: nursing expertise, teaching competence, and interpersonal relationship skills, and to identify characteristics (gender, age, program, and year level) associated with effective clinical teaching. The sample was composed of 158 randomly chosen students, Associate Degree Nurses and Associate Degree Midwives years 2 and 3, with clinical experience under preceptors at the 3 Referral Hospitals (Stung Treng, Kratie, and Ratanakiri) in Stung Treng region of Cambodia. Evaluations were ranked on a five-point scale with one being strongly disagree up to five being strongly agree.
Results: The mean scores for all items were 0.739. Mean rating scores for effective clinical teaching of preceptors was 3.63, with nursing expertise at 3.72, teaching competence at 3.51, and interpersonal relationship skills at 3.65.
Conclusions: The clinical teaching quality of preceptors can be improved by training with appropriate teaching methods with emphasis on effective clinical teaching practices to assist students in clinical competency.

Keywords: Cambodian nursing and midwifery students, Effectiveness of clinical teaching behavior, Preceptors

INTRODUCTION

Preceptorship programs are designed to provide: competent clinical teaching, evaluation, appropriate feedback and support, opportunities for working in a multidisciplinary team, development of interpersonal relationships, and theory-practice integration for students. Expected qualities of clinical nursing faculty related to teaching can be grouped into four major categories: professional competence, interpersonal relationship, personality characteristics, and teaching ability.[1] These qualities are important for competent practice within health care where students apply their learned knowledge, skills, and attitudes.

In nursing education, the clinical environment provides a real-world classroom and laboratory, where students are given the opportunity to integrate the cognitive skills gained from their pre-clinical subjects and clinical skills essential for professional nursing and midwifery practice.[2] Various teaching-learning strategies are utilized by preceptors such as bedside teaching done in small

groups, tutorial sessions, ward rounds, patient care team activities, actual patient contact with various types of clients either as outpatient or inpatient, small group discussions, simulation and role playing sessions, viewing of instructional materials in various forms of media (video, film, audio, etc.), and patient management integration sessions.[3]

A one-week training course designed for clinical instructors and clinical preceptors aims to train health staff to be qualified clinical preceptors who can provide quality field experience to nursing and midwifery students. The course focuses on: teaching methodologies, teaching/learning strategies, management of students during practicum, communication skills, supervision of the students, using logbooks, recording students' performance and learning outcomes. The preceptors learn how to serve as good role models and know how to find sources of information that can be accessible to students. It utilizes the process of partnering experienced nurses and midwives with fresh graduates to help in transitioning fresh graduates to the role of staff nurse or midwife. Candidates for preceptors as professional nurses and midwives are those who have worked at the hospitals and health centers for at least 3 years, are committed to teaching, have teaching competence and good interpersonal relationship skills, and are able to act as role models to students.

Effective learning, especially in clinical settings is largely dependent on the level of competence of the clinical faculty.[4] Students often complain that preceptors do not provide: enough feedback through clinical procedures, pre-post clinical conferences, case presentations or small group discussion, monitoring and supervision that impacts bedside teaching and management of patient problems, good preparation for formal clinical teaching, and opportunities for applying the nursing process. Past studies have shown reports of unsatisfactory experiences by both preceptors and students, marred by frustration, tension, and anxiety, which eventually led to failure.[5]

Many preceptors work in the different referral hospitals in the Stung Treng region such as Stung Treng, Ratanakiri, Mondulkiri, Phreah Vihear, Kratie, and Chlong. This study addresses the effectiveness of the clinical teaching of preceptors at three referral hospitals; Stung Treng, Kratie, and Ratanakiri. The three areas of effectiveness students evaluated were nursing expertise, teaching competence, and interpersonal relationship skills. Identifying characteristics (students' gender, age, program, and year level) associated with perceptions of effective clinical teaching were also examined.

The findings of the study are of value in improving effective clinical teaching practices by the preceptors to promote a partnership with students which strengthens education in nursing and midwifery. Finally, the health care system will be advanced by qualified nurses and midwives.

Many methods and surveys have been developed to assess competence and clinical teaching effectiveness. One framework for clinical assessment uses the following: (1) know (knowledge); (2) knows how (competence); (3) shows how (performance); (4) and does (action).[6] In the past, competent practice was only limited to technical knowledge, skills, and behaviors, which were often the emphasis of nursing curricula, including clinical training. At present, stakeholders (employers, clients, insurance companies, and health care team players) now have higher expectations from health care providers, beyond the mere technical aspects of practice (Lenburg).[7] Competencies can include: (1); assessment and intervention; (2); communication; (3) critical thinking; (4) teaching; (5) human caring relationships; (6) management; (7) leadership; (8) and knowledge integration.7 For many faculty members and clinical students; good role-modeling, satisfaction with nursing practice, competent technical skills, personality traits, interpersonal relationships, evaluation categories teaching ability, and nursing competence are essential characteristics.[8,9] A recent study on perceptions of effective and ineffective clinical instructors focused on: professional competence, interpersonal relationship, personality characteristics, and teaching ability.[1] Results from 214 students of two different nursing institutions showed that effective and relevant teachers received significantly high scores in all the four categories, while ineffective clinical teachers received lower scores in all four groups of characteristics, with professional competence as an exception. Competence is at the core of being an effective clinical instructor.

METHODS

Much nursing research has been done, identifying behaviors that students perceive to be essential for clinical preceptors, but it has been difficult to find a good effective tool. The most common categories applied in identifying behaviors include the following five categories: teaching ability, nursing competence, ability to evaluate, interpersonal relationship, and personality. A clinical teaching evaluation (CTE) tool was formulated and validated instrument that measured several effective clinical teaching skills including nursing expertise, teaching competence, and interpersonal relationship skills.[10] This research adapted that tool to evaluate the effectiveness of preceptor training.

A cross-sectional survey was utilized to inquire into students' perceptions on the effectiveness of teaching practices in the clinical setting among three referral hospitals in the Stung Treng Region. The descriptive study design was utilized to provide more information about the effectiveness of clinical teaching practices. This study only involved students from year 2 and 3 who practiced at the three referral hospitals above and were studying at Stung Treng RTC in academic year 2014-2015. These selected students were accessible to the researcher and no intervention/experiment was involved.

This study was conducted by the Stung Treng Regional Training Center which has a memorandum of understanding (MOU) with all referral hospitals in this region for students' clinical practicum each academic year, but only three referral hospitals were selected for being surveyed among twenty-six of its preceptors. The Khmer version of the questionnaire was pilot tested to ensure understanding of the items by Khmer nursing and midwifery students. The ten respondents for the pilot test were nursing and midwifery students in academic year 2014-2015 who answered questions of the cross-sectional survey and they stated that the tools measuring effective clinical teaching practices of preceptors and instruction were clear, so no revision was done. Reliability coefficient, clarity and understandability were determined during the pilot test.

Cronbach's alpha was computed for clinical teaching evaluation items by using the piloted data. The reliability coefficients were overall reliability coefficient = 0.74; nursing expertise was 0.74, teaching competence was 0.74, and interpersonal relationship skills were 0.71; which acceptable for allowing this study to proceed. The findings of the study showed the tool to be reliable and the initial testing of the items was sufficient.

From 260 year 2 and 3 students in the second semester of 2014-2015, a sample size was estimated according to the number of students and the standard error set at 0.05. Both male and female respondents had equal chances of being included in the study. The sample size from Stung Treng RTC was estimated following the Slovin's formula [n = N / (1 + Ne^2)] given below:

n= N where N refers to the population N (260)

$1+Ne^2$ and e^2 refers to the standard error set at 0.05

This was appropriate in studies where the effective clinical teaching behavior of N is not known. Final sample size obtained from the formula was 158 representing 60.76 percent of the total N (Table 1).

Students were asked to rank the 25 items for measuring the effective clinical teaching practices based on their clinical teaching-learning experiences. Students didn't describe specific preceptors but had in mind a preceptor that they met in their last practicum. Preceptors were requested to participate in this study by answering the survey questionnaires. Their participation in the survey study was of their own free-will and they could choose to discontinue their participation at any time.

Back-to-back translation of the CTE was done. The English version was first translated by the researcher to Khmer, and then from Khmer to English by another colleague, in addition, these two translations were presented for review and critique, after which appropriate revisions were made. The Khmer version of the questionnaires was pilot tested to ensure understanding of the items by Khmer nursing and midwifery students. The ten respondents for the pilot tested were second year nursing and midwifery students in academic year 2014-2015 from Stung Treng RTC. They stated the tools measuring effective clinical teaching practices of preceptors and instruction were clear. Reliability coefficient, clarity and understandability were determined during the pilot test. They did not suggest revising any items of the survey questionnaires.

The researcher was not involved as preceptor, supervisor, or evaluator of any of these students. Two data collectors from the regional training center who had three years of working experience were trained to assist the researcher through distribution of consent forms and questionnaires, then gathering them from the students within the following month. Students were informed that their identity and all the information would be made confidential and that their responses would not affect their grades or the official evaluation of their preceptors.

The students selected were requested to answer the questionnaire (CTE).[10] It gathered the following information: demographic data and students' perception on the effectiveness of clinical teaching practices of preceptors in: nursing expertise (9 items), teaching competence (7 items), and interpersonal relationship skills (9 items).

Descriptive statistics were utilized to analyze the variables of the practices of preceptors. The 25 clinical teaching evaluations (CTE) items were ranked on a five-point scale from 1 (strongly disagree) to 5 (strongly agree). Mean rating scores were computed to each clinical teaching evaluation item.

In subscale of mean scores, higher subscale of mean scores implied more effective clinical teaching practices of preceptors and lower subscale of mean scores implied ineffective clinical teaching practices of preceptors. The following levels were used: 1.00-1.49 (lowest), 1.50-2.49 (low), 2.50-3.49 (moderate), 3.50-4.49 (high) and 4.50-5.00 (highest). All 3 variables were compared by using ANOVA test to determine any significant difference. Students characteristics: gender, age, program, and year level were computed by using Chi-square test to examine significant association between all four variables.

RESULTS

There were twenty-six preceptors from three referral hospitals (Table 2), slightly more female preceptors (14; 53.85%) than males (12; 46.15%), although Kratie had more male preceptors.

Ratanakiri has a lower number of preceptors and least years of experience which can have some bearing on the results. Most preceptors are experienced in clinical teaching, with at least seven to nine years.

Table 1: Demographic profile of preceptors (n=26).

Hospital	Number	Gender		No. of years in teaching	
		Male	Female	4-6	7-9
Stung Treng	11	4	7	5	6
Kratie	10	6	4	4	6
Ratanakiri	5	2	3	2	3
Total	26	12	14	11	15

The two items with the highest scores reflect the focus on clinical practice and knowledge, while the two lowest points relate to finding and utilizing resources, which in this survey, does not seem to be a priority. Knowledge includes knowing how to find resources that are useful for critical thinking.

It is indicative of the lack of resources available in Cambodia but results of this survey indicate that students give more emphasis on clinical skills, than in the ability of preceptors to utilize resources.

Table 2: Level of effectiveness in clinical teaching practices of preceptors in nursing expertise.

Items	Mean	SD
Nursing expertise	3.72 (High)	0.91
Offers student opportunity to practice before evaluation.	4.22 (High)	0.82
Makes students aware of their professional responsibilities.	4.16 (High)	0.89
Shows interest in contributing toward the improvement of nursing.	3.77 (High)	0.85
Demonstrates technical skill in nursing activities where required.	3.75 (High)	0.92
Demonstrates flexibility in performing nursing functions.	3.71 (High)	0.85
Admits limitations of function in clinical situations honestly.	3.71 (High)	0.75
Shows genuine interest in patients and their care.	3.67 (High)	0.92
Utilizes other resources to augment nursing in planning care.	3.29 (Moderate)	1.14
Refers students to additional resource persons and materials.	3.21 (Moderate)	1.08

Table 3: Level of effectiveness in clinical teaching practices of preceptors in teaching competence.

Items	Mean	SD
Teaching competence	3.51 (High)	1.06
Demonstrates skills, attitudes and values that are to be developed by the students.	3.87 (High)	0.97
Constructs clinical assignments related to course objectives.	3.55 (High)	1.10
Is well-prepared for seminars or clinical conferences.	3.53 (High)	1.07
Organizes clinical learning experiences in a meaningful manner for the student.	3.49 (Moderate)	1.09
Relates underlying theory to clinical nursing situations.	3.4 (Moderate)	0.88
Conferences include worthwhile and informative material not in text.	3.39 (Moderate)	1.23
Stresses or reviews important material from theory classes.	3.37 (Moderate)	1.08

Table 4: Level of Effectiveness in clinical teaching practices of preceptors in interpersonal relationship skills.

Items	Mean	SD
Interpersonal relationship skills	3.65 (High)	1.02
Are objective and fair in the evaluation of the student	3.87 (High)	1.07
Gives constructive evaluation without embarrassing student	3.86 (High)	1.02
Helps in new situations without taking over	3.77 (High)	0.97
Respects the confidentiality of student relationships	3.7 (High)	1.11
Displays a sense of humor	3.66 (High)	1.04
Credits students for progress and improvement	3.64 (High)	0.97
Demonstrates confidence in the student	3.55 (High)	1.04
Shows recognition of the individuality of the students	3.5 (High)	0.91

Teaching competence should align with the objectives of the course and demonstrate skills that students can model, as well as being flexible according to the needs of the students. The items with moderate scores indicate that preceptor training needs to include discussion about critical thinking skills which integrate theory and practice. There is more emphasis on just being organized,

but not knowing how to make connections with theory and practice.

The highest scores indicate that preceptors are able to relate to students and have the knowledge to evaluate students. The lowest score indicates a preceptors' weakness in allowing students to express opinion or ask questions.

Overall level of effective clinical teaching

Among the three referral hospitals, there was no significant difference in the nursing expertise scores nor in interpersonal relationship skills. Preceptors at the Kratie hospital had much higher ratings by students in all categories and the best in interpersonal relationship skills. Stung Treng showed the least in both nursing expertise and teaching competence and only slightly higher in interpersonal relationships that Ratanakiri. There was also no significance related to students' gender, age, program and year level.

Table 5: Comparison of nursing expertise, teaching competence, and interpersonal relationships of the 3 referral hospitals.

Hospital	Mean	SD	Significance (p)
Nursing expertise	3.72	0.91	0.34
Stung Treng	3.58	0.98	
Kratie	3.87	0.86	
Ratanakiri	3.65	0.89	
Teaching competence	3.51	1.06	0.30
Stung Treng	3.37	1.11	
Kratie	3.68	1.00	
Ratanakiri	3.43	1.06	
Interpersonal relationships	3.65	1.02	0.35
Stung Treng	3.57	1.00	
Kratie	3.78	0.97	
Ratanakiri	3.55	1.06	

DISCUSSION

Among all the various population groups studied type II Teacher knowledge is a critical factor in effective clinical teaching whether in theory or clinical sites. The current study revealed that nursing expertise is the most practiced behavior by preceptors. Therefore, preceptors must have a high level of nursing clinical skills (cognitive, psychomotor, and affective). These survey results are true because the curriculum of many Cambodian nursing schools focus more on nursing skills rather than interpersonal relationship skills. One study revealed that clinical preceptors can profit from an appropriately designed preceptorship training program that will enhance their knowledge, skills, and attitudes as well as increasing their confidence in their role.[11] Therefore, having resources is useful for critical thinking. The results of this survey indicate that students give more emphasis on clinical skills, than in the ability of preceptors to utilize resources.

Preceptors should give constructive evaluation that is objective, fair, and recognizing and respecting confidentiality of student relationships. Establishing a learning environment that provides support for students' learning in the clinics depends highly on the available support systems: supervision quality, mentoring structures, and preceptorship, and interaction between clinical preceptors, nursing students and clinical health care providers.[12]

Teaching competence is affected by preceptor curriculum training. The preceptor training did not cover all the information in the survey questionnaires, therefore the survey results reflected this lack of training as related to patient care, especially patient rounds and patient care plans. Good teaching methodologies and teaching–learning processes are needed to enhance the quality of clinical teaching. Provision of a comprehensive orientation to clinical preceptors before they start handling students in the clinics is crucial for a successful clinical training program and should include an overview of the curriculum, their role as a clinical teacher, and assessment and evaluation processes.[5]

These findings can help improve preceptor clinical teaching skills and in identifying areas they need to grow in. Health institutions should use this information for training to improve preceptor performance in clinical teaching, give confidence in using various teaching methodologies, and helping them to be good role models to increase the quality of education for nurses and midwives. Nursing schools should conduct regular meetings with referral hospitals to improve management for student clinical teaching-learning practice.

There needs to be more research which includes more dimensions than just students' perceptions. The perceptions of clinical preceptors may be included as well as other evaluation data sources.

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