EFFECT OF PRECEPTOR EDUCATION IN THE DEVELOPMENT OF CRITICAL THINKING IN NEW GRADUATE NURSES

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Chapter 1

Introduction

There is minimal research discussing the relationship between preceptorship and the new graduate nurses’ ability to think critically. Examining this relationship could lead to better orientations for new nurses, improved safety for patients, and cost-effective nursing care.

The ability to think critically allows the nurse to make important clinical decisions in a swift, precise manor leading to patients receiving appropriate care without delay. According to Benner, (1984) novice to expert theory, nurses develop critical thinking over time with experience. The purpose of this study is to determine if new nurses can move through these stages quicker if paired with a preceptor that facilitates critical thinking.

Research Question

1. Is there a difference between the critical thinking scores of post-orientation new nurse graduates whose preceptors completed a research-based, theory-driven preceptor educational program and critical thinking scores of post-orientation new nurse graduates whose preceptors have not completed a preceptor educational program?

Critical thinking allows nurses to think beyond the tasks in front of them and
focus on the big picture. Nurses, who can critically think are able to take all of the pieces of information about a patient or situation and figure out what needs to be done. Critical thinking in nursing is essential to best nursing practice and patient care.

In 1984, Benner described the states of nursing competence. Benner’s stages of nursing competence states that nurses move through five stages ranging from novice to expert. The new nurse begins at the novice stage where their main concern is the completion of tasks and adherence of rules. In the second stage or advanced beginner stage, there are principles to guide actions that are beginning to be formed. These principles are based on the experiences had or observed by the new nurse. The third stage, or competence stage, is marked by conscious, deliberate planning that enables them to provide efficient, competent care. This nurse is able to make long-term goals but is unable to plan care according to the big picture. In Benner’s fourth stage, or proficient stage, the nurse is able to see situations as a whole and make appropriate decisions based on the situation. Critical thinking is intact at this point. Nurses in Benner’s fifth stage, or expert stage, nurses no longer follow analytic principle in the decision making process but are driven by intuition instead (Benner, 1984).

Conceptual Framework

The conceptual model used was designed to demonstrate the relationships of the new graduate nurse, the preceptor as a scaffold, preceptor development education, and the process of bridging the new graduate nurse to professional practicing nurse. Beginning as a new graduate nurse with minimal knowledge and skills facing a knowledge gap between theory and practice, the preceptor educated in a research-based, theory-driven development program can scaffold the new graduate nurse while assisting
the individual to build a bridge traversing the knowledge gap. The resulting professional practicing nurse should be able to demonstrate the below listed cognitive skills and habits of mind dimensions of critical thinking (Sorensen & Yankech, 2008).

Cognitive skills consist of analyzing, applying standards, discriminating, information seeking, logical reasoning, predicting, and transforming knowledge. Habits of the mind are confidence, contextual perspective, creativity, flexibility, inquisitiveness, intellectual integrity, intuition, open-mindedness, perseverance, and reflection (Sorensen & Yankech, 2008)

**Definitions of Terms**

Critical thinking is defined as a purposeful, self-regulatory judgment; an interactive, reflective, reasoning process of making a judgment about what to believe or do (Beckie, 2001). Critical thinking is measured using the California Critical Thinking Skills Test 2000 (CCTST) by Facione, Facione, Blohm and Giancarlo, 2002.

A preceptor is an experienced staff nurse, who supports and guides a new graduate nurse through the development of psychomotor skills, documentation, responsibilities, values of professional nursing, interpersonal communication, and the promotion of critical thinking skills (Alspach, 1988). Often, despite the role responsibilities, preceptors may have not had formal education in teaching-learning process and may not have received an institution-based preceptor development course with or without critical thinking as an integrated concept (Sorensen & Yankech, 2008).

Preceptorship is a process in which an experienced staff nurse assists a new nurse in the orientation process of being a nurse and to critically think. Ideally the new nurse exits the precepting experience with the ability to use critical thinking in their nursing and
patient care. Preceptorship for purposes of this study is measured by attendance at 3 hour education program titled “Precepting in the Fast Lane”, where preceptors obtain skills to facilitate critical thinking in other nurses (Sorensen & Yankech, 2008)

**Limitations**

The limitations of this study are that such a small sample size is used and it that it is performed among one cultural group of mid-western nurses. Studies should be replicated with larger sample size in various different cultures to evaluate if a continued education intervention for preceptors impacts critical thinking on a larger scale and/or in diverse populations.

**Summary**

New (advanced beginner) nurses often have a difficult time focusing on anything other than the task at hand. As more demands are placed on “advanced beginner” nurses, an ability to be able to critically think when providing patient care is great. However, according to Benner (1984)s, critical thinking in nurses at the bedside does not usually occur until “proficient” stage, which usually does not occur until two years after beginning as a new graduate nurse. This partially replicated research study will examine the effects that a trained preceptor has on a new nurse’s ability to critically think as they progress through the earlier stages of skill acquisition.
New nurses have a lot of stressors during their first year of practice. According to Myers et al. (2006), these stressors include lack of confidence, concerns about relationships with peers and preceptors, losing sight of the big picture, time constraints, fear of causing patient harm, feeling incompetent, and lack of critical thinking and clinical knowledge, dissatisfaction with work schedules, and inadequate staffing and work conditions. Preceptors can effect the fears and stressors of this new role during the preceptor process and into first year of practice. The preceptor has more one on one contact with the new nurse than any other member of the health care team will. They are the individual who is with the new nurse daily for the duration of her orientation process and then serves as a reference person after the process is completed. Current research states that preceptor behaviors have an impact on the success or failure of a preceptor experience. Preceptor behaviors such as compatibility, role modeling, and feedback contribute to student learning and the success of the preceptorship (Myrick & Yonger, 2004). If preceptors can impact the new nurse so profoundly in so many areas it is rational to concluded that that they could have a significant impact on their ability to think critically and can assist the new nurse bridge the gap from theory into the use of critical thinking critically in practice.
Critical Thinking in Nursing

Studies using the Watson-Glaser Critical Thinking Appraisal and the California Critical Thinking Skills Test to assess critical thinking in baccalaureate nursing students over the course of their nursing education have produced inconclusive findings. Some studies show significant gains in critical thinking while others have shown no significant changes.

The purpose of the study by Beckie (2001) was to evaluate the attainment of critical thinking skills of nursing students in an upper division baccalaureate nursing program, as measured by the California Critical Thinking Skills Test (CCTST), before and after curriculum revision. They aimed to answer the following questions: (a) What is the difference between critical thinking skills of baccalaureate nursing students who completed the former nursing curriculum and those who completed the revised curriculum that promotes critical thinking? (b) What is the change over time in baccalaureate students’ critical thinking skills from entry into the junior year of an upper-division, baccalaureate nursing program, at mid-point, and at exit?

This study was conducted at a west central Florida university. A longitudinal, pre-test, post-test, nonequivalent control group design was used. The sample was a convenience sample of baccalaureate nursing students entering their junior year. Participants were largely female, Caucasian, and single with mean ages of 24.6 years, 25.8 years, and 26.4 years. Most had no prior experience w/ a formal critical thinking course. Three cohorts were formed that consisted of 55, 55, and 73 students. Cohort 1 was the baseline class while 2 and 3 received the revised curriculum. The California Critical Thinking Skills Test (CCTST) was used to evaluate critical thinking on all
participants. The students were given the CCTST on the first day of class their junior year, beginning of their senior year and upon exiting the nursing program. A demographic data form was also used (Beckie, 2001).

Cohort 2 demonstrated statistically significantly higher scores then cohort 1. Cohort 3 did not show an increase in critical thinking skills over time. The lack of change in score for cohort 3 could be related to some life changes significant to their group. The results demonstrate that critical thinking was increased and that scores can be effected by personality, life events, and distraction of graduation, employment and preparation for the NCLEX. Findings would be better validated by repeating this study with future students (Beckie, 2001).

The Theory of Critical Thinking of Nursing

Along with evolution in the scope of nursing practice, there has been greater autonomy for nurses and a growing demand for expanded critical thinking abilities and the ability to solve problems and make decisions. Because of increased autonomy there has been an increased emphasis on critical thinking in nursing education. This focus has led to needing a change in teaching methods. New methods must foster critical thinking. Martin used the following research questions in their study:

1. Is there a difference in critical thinking as conceptualized by Paul, among nursing students, graduate nurses (GNs), and expert nurses representing differing levels of clinical nursing expertise as defined by Benner?

2. Is there a difference in critical thinking among nursing students, GNs, and RNs prepared at associate bachelors & levels?
3. Is there a difference in quality of decisions made during a clinical simulation among the levels of clinical expertise of nursing students, GNs, & expert nurses?

4. What are the relationships among demographic variables, critical thinking and decision making?

The framework used in this study was based on Benner and Paul’s works. Benner’s novice to expert theory focuses on the stages nurses go through prior to becoming experts in their field. Benner states that there are five stages including expert. They are in this order, novice, advanced beginner, competent, proficient and then expert. Paul’s work focused on critical thinking (Paul, 1992). His work stated that critical thinking is a learned skill that consists of four domains. These four domains are elements of thought, abilities, effective dimensions, and intellectual standards.

A stratified convenience sample of 149 nursing students, graduate nurses, and RNs were used. The sample consisted of 27 associate degree of nursing, 20 bachelors degree of nursing (BSN) nursing students, 28 associate and 20 BSN graduates and 54 RNs with five or more years of experience. A descriptive correlational design was used. They used several instruments in the study, including the Elements of Thought Instrument (ETI), videotaped vignettes and demographic sheets. The ETI was used to measure critical thinking. Videotaped vignettes with response audio taped responses were used to also evaluate critical thinking and decision making.

The findings of this study show that critical thinking scores and decision skill increased as the level of clinical expertise increased. The findings imply that as Benner’s theory discusses, it is not the type of education that increases critical thinking skills but instead the amount of time and experience in a field (Martin, 2002).
Transition from Student to Nurse

Transition into the role of RN after graduation from nursing education programs results in new nurses feeling overwhelmed and unprepared for the challenges of the workplace. Research is lacking on the transition of students to the graduate nurse role through preceptored experiences that take place during the final year of a baccalaureate nursing program (Wieland, Altmiller, Dorr, & Wolf, 2007).

The purpose of the study by Wieland et al. (2007) was to describe the clinical transition experience of senior baccalaureate nursing students during pregraduation preceptored practicums. The questions they wished to answer were: (a) What is the clinical transitional experience for BSN students who participate in an intensive preceptorship, 3 days a week for 3 weeks, during the senior year (from the perspective of students, liaison faculty and clinical preceptors?), and (b) What patterns in the clinical transitional experience reveal issues for continuous improvement of the BSN program?

A longitudinal design was used for this study. A convenience sample of 14 full-time senior nursing students was used. All students were full-time undergraduate students enrolled in an adult, acute care, senior-level course at the end of their program. The students ranged in age from 21 to 42. Two of the students were male and 2 of the students were married. Eleven students were white, 2 were African-American and one was not identified. All but one student spoke English as their primary language. Three clinical faculty employed by the university and nine clinical preceptors employed by the health care agencies also participated in this study (Wieland et al., 2007).

Students were given a form titled “Daily Feedback Sheet on Transition to the Graduate Nurse Role” (DGSTGNR). Students filled out these forms on the third, sixth
and ninth days of the practicum with handwritten comments. A preceptor form was used to allow the preceptors to comment on changes they saw in students. There also was a nursing faculty form which elicited comments on individual student performance and group changes. Faculty and preceptor forms were also completed on the third, sixth and ninth days of the practicum (Wieland et al., 2007).

The study found that the preceptorship helped students to improve in their time management abilities, documentation skills, and they became more comfortable with more responsibilities. By the final day they were requesting challenges to improve critical thinking, were more accountable with their actions and collaborated more frequently with health care providers. The students were more efficient, organized, and more competent in performing nursing skills. They adapted to unit environment and handle stress better. They also administered medications proficiently. These findings were acknowledged by the students and their preceptors and faculty members upon completion of the research (Wieland et al., 2007).

**Transition for Graduate Nurse to Registered Nurse**

Despite the increased numbers of patients requiring care and the nursing shortage there is still a significant turnover rate in graduate nurses. This turnover rate is likely do to multiple factors such as job stressors, role attainment issues, high standards, knowledge deficit and numerous other issues. Zinsmeister and Schafer (2009) looked to identify the reasons for this turnover by exploring “the lived experiences of graduate nurses during their first 6 to 12 months of employment.” They were looking to gain insight on how to improve the transition period and increase retention of graduate nurses.
Zinsmeister and Schafer (2009) used a qualitative, phenomenological design for their study. The phenomenon of interest was the lived experience of the graduate nurses during their first 6 to 12 months of practice. The sample consisted of 9 graduate nurses who had been working at least 6 months but no more than 12 months. The study took place on the east-coast with in a specific health care system. The sample was interviewed using standardized open-ended questions.

Five themes were discovered that contribute to a positive transition experience for graduate nurses. They were, supportive work environment, positive preceptor experience, comprehensive orientation process, sense of professionalism and clarity of role expectation. Supportive work environment was the strongest theme. Positive preceptor experience and comprehensive orientation programs were also identified as very important. The graduate nurses identified positive preceptors as important because they felt they could ask questions without being embarrassed. This reference person who was non-threatening allowed graduate nurses to develop and ask questions without fear (Zinsmeister & Schafer, 2009).

**Safety Concerns of New Registered Nurses and Their Preceptors**

Nurses require knowledge and skill to perform their jobs. New to practice registered nurses (RNs) are at risk because they have not developed the knowledge and skill yet to perform in complex clinical situations. In addition to not having the developed clinical practice new RNs also have various other stressors involved in learning a new job/career. The researchers explored the perceptions of both new-to-practice RNs and preceptors about the learning needs of new-to-practice RNs as those perceptions relate to patient safety (Myers et al., 2010).
The perceptions of new-to-practice RNs and their preceptors were explored using a focus group study. This study took place in two urban hospital settings. The sample consisted of new-to-practice RNs who had been practicing less than a year and nurses who had been preceptors with in the previous year. All participants were RNs. Age for both the preceptors and new-to-practice RNs ranged between 25 and 45 years of age. All preceptors were female. The new-to-practice RN group consisted of 3 men and 16 women. The new-to-practice RNs had all been practicing between 10 to 12 months. The preceptors’ years in precepting ranged from under 5 years to over 15 years of experience. The majority of preceptors had less than 5 years of preceptor experience. Questions were asked and discussion facilitate by the moderators in order to identify perceptions related to learning needs, safety concerns, and role consideration of the new-to-practice RN (Myers et al., 2010).

The questioning resulted in several themes for each question. The following themes emerged as concerns for new-to-practice RNs, preceptors or both: (a) role and skill development, (b) preceptor teaching strategies, (c) critical thinking, (d) communication, (e) technical aspects, (f) barriers, (g) preparation for nursing, (g) clinical experience, (h) clinical practice support, (i) feedback, (j) nurturing, and (k) orientation. Out of these themes a need to refine and promote essential concepts was found. Critical thinking, prioritizing nursing care, and delivery of safe nursing care were the concepts in need of promotion with new-to-practice RNs. These concepts could possibly, especially critical thinking, be better reinforced with preceptor training (Myers et al., 2010).
Preceptors and Their Impact on Critical Thinking

There has been minimal if any research done to examine the process used in the preceptorship experience to enhance critical thinking at the graduate level. However, research does show that preceptor behaviors such as role modeling, compatibility and feedback contribute significantly to the success or failure of the preceptor experience. The purpose of the study (Myrick & Yonge, 2004) was to examine the preceptorship experience and its role in the enhancement of critical thinking in graduate nursing education. The assumption going into the study is that graduate students are adult learners, already critical thinkers with various work and life experiences and committed to their career.

A grounded theory approach was the design for the study (Myrick & Yonge, 2004). The sample was a convenience sample of 10 graduate nursing students from two university graduate programs in a large urban area of Western Canada. All of the participants had to be able to speak and comprehend English, be involved in a structured preceptor experience and also be willing to sign consent for participation in the study. The sample was all female ranging in age from 26 to 53 years. Preceptors were both masters and doctorally prepared, 6 female and 2 male, and ranged in age from 47 to 58 years old, their experience ranged from 1 to 25 years of precepting.

Data were collected through semi-structured, tape-recorded interviews. A total of 45 tape recorded interviews that were transcribed verbatim and the results shared with the participants at each subsequent interview. Journals of personal reflection were also kept by researchers (Myrick & Yonge).
The results of the study suggest that even at the graduate level preceptor behaviors are linked to the success or failure of the preceptorship experience. They found that relationship between the parties “pivotal to the enhancement of the graduate student’s critical thinking”. Identifying and acknowledging that there is a power differential between preceptor and student can create a more equal relationship in which critical thinking can be fostered. This information demonstrates the importance of preceptor selection and training. Placing inappropriate individuals in precepting roles can result in holding back the student. Those that are able to demonstrate behaviors such as respect, flexibility, openness, and trust will facilitate a good learning environment for students. Meanwhile those that demonstrate behaviors such as role consciousness, constraint, lack of safety, and unquestioning attitude will facilitate a poor learning environment for the student (Myrick & Yonge, 2004).

**The Questioning Skills of Clinical Teachers and Preceptors**

Phillips & Duke conducted a study to answer several questions in relation to how clinical teachers differ from preceptors in their questioning of student nurses. Several questions were posed in this study, they were as follows: (a) What is the level of questioning used by undergraduate clinical teachers and preceptors? (b) Is there a difference between the levels of questioning used by these two groups? (c) Do clinical teachers and preceptors identify high level questions as important in facilitating learning? (d) What is the relationship between further academic qualifications and the number and category of higher level questions asked? (e) Is there a relationship between years of experience and the number and category of higher level questions asked? (Phillips, 2001).
A quantitative approach utilizing a comparative descriptive design was used in this study. The study took place in metropolitan area of Melbourne Australia. A total of 28 educators were used in this study sample. Fourteen clinical teachers from three Melbourne universities composed the clinical teacher sample and 14 preceptors from 2 hospitals comprised the preceptor sample. Clinical teachers were older and more professionally experienced as a group. They ranged in age between 30 and 57 years of age while preceptors were between 23 and 29 years old. Thirteen of the preceptors had three years or less experience as a preceptor while only six of the clinical teacher had less than 3 years experience in their roles. One of the preceptors had five years of experience while half of the clinical teachers had over 5 years of experience. Clinical teachers facilitated groups of 8 students to 1 teacher while preceptors facilitated one student at a time. A questionnaire was used for data collection. The questionnaire consisted of demographic data and three case studies. The case studies were used to identify the level of questioning the participants would use (Phillips & Duke, 2001).

The conclusion of this study was that both clinical teachers and preceptors ask a large number of lower level questions. These are questions that require factual recall but do not stimulate critical thinking. Clinical teacher asked a larger number of questions than preceptors but preceptors asked a larger number of lower level questions. As a whole both clinical teachers and preceptors need to ask more higher level questions to facilitate critical thinking among their students (Phillips & Duke, 2001).

**Preceptorships and Critical Thinking**

The question is not if critical thinking is an important part of nursing education. Critical thinking is essential for all nurses to develop. The question is how is critical
thinking best fostered in nurses? This particular study aims to generate data that can be used by preceptors to develop and promote critical thinking in baccalaureate nursing students. The study by Myrick (2002) took place in a large tertiary care teaching hospital in a variety of units. The participants received preceptorship in their work areas which consisted of emergency department, child health center, neurosurgery, cardiothoracic surgery, and a general surgery/liver transplant unit. A total of 6 preceptors and 6 preceptees were used in the study. Preceptees ranged in age from 24 to 29 years of age while preceptors were between 29 and 54 years old. Nursing experience of preceptors ranged from 7 to 30 years of experience. All participants in the study were required to speak and understand English, be or have been involved in a structured clinical preceptorship, and sign a consent agreeing to participate in the study (Myrick, 2002).

A grounded theory approach was used in this study because “it allowed the researchers to explore the process used in the preceptorship experience to develop and promote critical thinking and to directly address what is happening in that process, rather than what should be happening.” Audiotape recorded interviews were used to collect data. A total of 32 interviews were performed using open-ended questions. Time frame of the interviews lasted between 15 and 90 minutes. Demographic data collection and researcher observation were also used. The researcher visited the practice setting and observed each dyad for approximately 4 hours. Field notes were taken during the observation and confirmed later by the participants (Myrick, 2002).

Myrick found that staff acceptance was directly linked to the preceptee’s ability to critically think in the practice setting. Preceptor behaviors and direct questioning also facilitated critical thinking in preceptees. She found in her study that preceptor behaviors
were more likely to trigger preceptee critical thinking than direct questioning. The behaviors observed that triggered critical thinking were role modeling, facilitating, guiding and prioritizing. Questions that encouraged critical thinking were questions about knowledge base, decision making and actions (Myrick, 2002).

Sorensen & Yankech’s (2008) study evaluated what impact a preceptor had on the development of critical thinking in graduate nurses. The study was performed in a Midwestern non-for-profit hospital system. A convenience sample of 31 graduate nurses was use. Fifteen were used in the experimental group while 16 participated in the control group. There were 47 preceptors that participated in the preceptor intervention “Precepting in the Fast Lane”. Of the 47 preceptors that participated in the continuing education intervention 15 were used as preceptors in the study. All participants were given a written explanation of the study and participation was voluntary.

The preceptors attended a 3 hour continuing education course “Precepting in the Fast Lane” designed to help preceptors facilitate critical thinking in new graduates. Semi-structured interviews were performed with the preceptors to evaluate how the continuing education impacted their practice as preceptors. The California Critical Thinking Skills Test (CCTST) was used with new graduate nurses to evaluate the impact of the preceptors in their critical thinking.

Qualitative data was also necessary to provide a more complete picture of the effects of a formal preceptor course on critical thinking of new nurses. As noted before, semi structured interviews with preceptors were used to collect this data. When preceptor interviews are triangulated with CCTST scores of the preceptees it was found that the qualitative data supports the quantitative findings of the study. Qualitative data returned:
(a). Identification of need for the education; (b). Value of the educational program; and (c). Benefits to preceptees (Sorensen & Yankech, 2008).

Results show that nurse preceptors who had participated in a research-based, theory-driven preceptor educational program can improve the graduate nurses preceptees’ ability to critically think, which was proven by a higher CCTST score in the experimental group of nurses. Nursing preceptors must have an understanding of how learning occurs, the concepts involved in critical thinking, and skill development in facilitating critical thinking to maximize the learning experience and knowledge retention of new graduate nurse transitioning into professional practice (Sorensen & Yankech, 2008). Through qualitative data demonstrated that there was a positive influence noted on the part of the preceptors. Preceptors indicated that due to the preceptor course they were using higher levels of questioning strategies with their preceptee and had changed their practice.

The Role of the Preceptor

The role of preceptor has been proven to make an impact on the orientation and development of new nurses. However, there is limited, research that demonstrates their impact on critical thinking in the novice nurse. Forneris and Peden-McAlpine (2009) conducted a study to determine the impact of the preceptor coaching component of a reflective contextual learning intervention on novice nurses’ critical thinking skills during the first 6 months of their practice.

A qualitative instrumental case study design was used over a 6 month period. The study was conducted in an acute care facility in a major metropolitan area of the northwest United States. The sample used consisted of 6 novice-nurse preceptor dyads. The median age of preceptors was 35. Education for preceptors was representative of
both associate degree and baccalaureate degree nursing. Median years of practice for
preceptors was 14 with varied backgrounds in medical-surgical, cardiac, orthopedics, and
oncology (Forneris & Peden-McAlpine, 2009).

The contextual learning intervention (CLI) was used in the study. It is a model of
clinical learning that encompasses reflection, context, dialogue, and time. These evaluate
through the use of four components: (a) narrative reflective journaling; (b) individual
interviews; (c) preceptor coaching; and (d) leader-facilitated discussion groups. Preceptor
data was collected at month 1 prior to instruction and then again at month 6 at the
conclusion of the study. The investigator trained the preceptors in coaching and critical
thinking and then during the first 3 months of the study preceptor coaching was
implemented (Forneris & Peden-McAlpine, 2009).

The result of the study (Forneris & Peden-McAlpine, 2009) showed that when
interviewed at month 1, preceptors described critical thinking as “the ability to organize
tasks and manage time.” Their focus was on task completion, routines, and procedures.
This allowed minimal time for dialogue with novice nurses. Critical thinking was
verbalized as important, but there was discernment between coaching for task
management and coaching for critical thinking. When interviewed at month 6, preceptors
acknowledge that focusing on the attributes encouraged by the CLI helped develop
critical thinking in their preceptees.

After they changed their precepting style, their definition of critical thinking
changed as well. The new definition of critical thinking was “a dialogue to share thinking
and understand rationale.” Three important findings were obtained with this study: (a)
The preceptor role and power affected novice nurses’ thinking; (b) Dialogue enhances
critical thinking; and (c) Thinking out loud elicits novice nurse thinking and better understanding and better understanding of rationale behind actions and helps novice nurses make important learning connections.

**Preparation of Preceptors**

The preparation of preceptors of students and new graduates is an important issue. Those, who educate new nurses and nursing students need to be equipped to instruct them appropriately so they are able to function and critically think independently once practicing nursing on their own. This study by Rogan (2009) investigated the perceptions of nurses, who precept BSN students. They were asked two questions: (a) What types of preparation do nurses, who precept students believe is required for them to perform their role? and (b) Is there a difference in the perceptions about preceptor preparation based on the preceptor’s years of nursing experience, area of practice, or years of preceptor experience?

This descriptive study used a demographic questionnaire and the “Preparation of Nurses Who Precept BSN Students Survey” to obtain information. In the survey, the preceptors were asked to rate 33 content areas pertaining to preceptor preparation as essential, useful, or not needed. The sample used was a small group from two Midwestern mid-sized hospitals. The nurses were all RNs, who were: (a) Employed by one of the two hospitals; (b) Met the State Board of Nursing’s criteria for preceptors; and (c) Had precepted a student the previous 12 to 18 months. The preceptors were predominantly female and ranged between 21 and 30 years old with preceptor experience ranging from 1 to 5 years (Rogan, 2009).
Findings of this study (Rogan, 2009) suggested that how to set priorities and organize workload was essential (93.3% found it important). Preceptor responsibilities (94.7%) and preceptor roles (90.7%) were also deemed important. Teaching critical thinking was found to be 4\textsuperscript{th} in overall importance (88.0%). There was very little difference about preceptor preparation based on years of experience. However, there was a difference based on area of practice. Those who worked in medical-surgical departments, identified understanding responsibilities and roles of preceptors as most important. Those, who worked in the critical care department rated how to teach students critical thinking as a higher priority (Rogan, 2009).

\textbf{Interventions to Improve Critical Thinking}

There is limited nursing research evaluating the development of critical thinking in novice nurses. The continual struggle by nurse educators to improve critical thinking demonstrates the need for innovative educational interventions that assist in the development of critical thinking as novice nurses enter into practice.

The purpose of the study by Forneris and Peden-McAlpine (2007) was to determine if a reflective contextual learning intervention would improve novice nurses’ critical thinking during the first 6 months of their practice. In order to eliminate confusion they define critical thinking, reflective thinking and reflection. Critical thinking is defined as the process of reflective thinking that goes beyond logical reasoning to evaluate the rationality and justification for actions within context. Reflective thinking- thinking in practice differs from thinking in structured learning situations because real world problems provide unique complexities that do not present themselves in structured
formats. Reflection is a thinking process of creating and clarifying the meaning of an experience.

The sample consisted of six novice nurse/preceptor dyads from an acute care facility in a major metropolitan area in the northwest United States. The sample was a convenience sample. A qualitative instrumental case study design was used. The CLI or contextual learning intervention used in this study consisted of four components: narrative reflective journaling, individual interviews, preceptor coaching and leader-facilitated discussion groups. The data on critical thinking was collected through individual interviews, discussion groups and narrative reflective journaling at varying intervals. All interviews and discussion groups were tape recorded and transcribed (Forneris & Peden-McAlpine, 2009).

This study found that the contextual learning intervention assisted in the development of critical thinking within the context of practice. They also found that dialogue between preceptor and preceptee is very important in developing a process of critical thinking in practice. The study also demonstrated that reflective practicums are effective in operationalizing abstract theoretical principals into daily care-giving practices and creating a deeper understanding for patient needs (Forneris & Peden-McAlpine, 2009).

**Does Critical Thinking Improve with the Implementation of Additional Education?**

Critical thinking is essential for critical care nurses because they deal with large amounts of information and required to make educated decisions quickly. The ability to critically think is required when an individual is confronted by a problem with no immediate and obvious answer (Rogal & Young, 2008). The purpose of the study was to
determine if critical thinking skills of nurses enrolled in a post-graduate critical care course improved over time.

This pilot study took place in Western Australia. A California Critical Thinking Skills Test (CCTST) was used to evaluate the critical thinking skills of 31 registered nurses before and after their educational experience. The majority of the samples used were female nurses with approximately 5.5 years of nursing experience and 2.3 years of critical care nursing experience. Two different groups of the nurses were enrolled in the Sir Charles Gairdner Hospital Graduate Certificate of Critical Care Nursing course in 2005 and 2006. The course was a 12 month, full-time program, which consisted of theory classes and clinical rotations between intensive care and coronary care units. Pre and post tests were that 45 minutes long were give to evaluate critical thinking. The tests included a demographics section as well as questions to evaluate critical thinking (Rogal & Young, 2008).

Post graduate nursing students’ total scores were higher overall than the normative group. A slight improvement was seen in critical thinking of the post-graduate nursing students at the post-test increment while no significant difference was noted for the nursing group. However, pre and post test scores were above average for the CCTST suggesting that registered nurses, who enroll in post-graduate studies already posses developed critical thinking skills. Overall the sample performed well in the areas of analysis and inference while scoring lower in the areas of evaluation and problem-solving. The study also showed some minor improvement in inductive and deductive reasoning but nothing that was statistically significant.
This pilot study suggests that a course assisting nurses in the development of critical thinking could be helpful if used in the right population. Nurses who have been in practice and seek out post-graduate studies may not be the appropriate group to implement this course with since critical thinking develops with experience. However, research implementing the same course at a novice nurse level may see different result, specifically an increase in critical thinking skills among novice nurse participants.

**Summary**

In summary, the literature shows that the preceptor can impact a new nurse’s ability to critically think. New nurses and even nurses in new roles experience increase stress and fears. The preceptor is the one individual who spends the most time with the new nurse and impacts their ability to critical think and transition through roles. Beckie, Lowry, and Barnett (2001) showed that critical thinking can be impact by life events including graduation, employment, and preparation for the NCLEX in addition to education and preceptor involvement. Wieland et al. (2007) found that baccalaureate students in preparation for graduation benefited from appropriate preceptorship. Those students who were participated in pregraduation preceptored practicums adapted to stress better, were more organized, efficient, and competent in nursing skills and requesting assistance in developing their critical thinking skills.

The research that is available regarding preceptors and their role on critical thinking in the new graduate suggests that there is a direct link. Research shows that even at the graduate level preceptor behaviors impact the students overall success. Attitudes such as respect, flexibility, openness, and trust facilitate a good learning environment for students and foster critical thinking at the graduate level (Myrick & Yonger, 2004).
findings included that preceptor behaviors such as role modeling, facilitating, guiding, and prioritizing facilitated critical thinking in the baccalaureate nursing student. She also found that questions that encouraged critical thinking focused on knowledge base, decision making and actions.

Sorensen and Yankech (2008) found that educating the preceptors impacted the new graduates’ critical thinking. They found that CCTST scores of new graduates increased with the use of a continuing education intervention for the preceptors. This research demonstrates a direct link in between new nurses’ critical thinking and their preceptors. This research and research of its likeness needs to be replicated in ordered to solidify the link between preceptors and new nurses’ critical thinking skills.
Chapter 3

Methodology

Problem

There is limited research on how the relationship between preceptorship and the development of critical thinking in the new graduate nurse. The research available shows that preceptor behaviors such as role modeling, compatibility and feedback contribute significantly to the success or failure of the preceptor experience. Research that examines how a research-based, theory-driven preceptor education course impacts the critical thinking scores of new graduates is non-existent.

Purpose

The purpose of this partially replicated study originally performed by Sorensen and Yankech (2008) is to examine whether a research-based, theory-driven preceptor educational program could improve the critical thinking of new graduate nurses, explore how participation in the program would influence preceptors, and evaluate critical thinking outcomes of the new graduate nurses.

Research Question

1. Will the completion of a research-based, theory-driven preceptor educational program for nurse preceptors improve the critical thinking scores of their new graduate nurse preceptees after completion of nursing orientation?
Population and Sample

This study will be performed in a Midwestern not-for-profit hospital system. All newly hired registered nurses will be considered for participation in the study. Approximately 30 newly hired nurses will be recruited to participate. Group 1 will be new graduate nurses hired between December 1 and March 1. Group 2 will be new graduate nurses hired between March 1 and June 1. The difference in the two groups will be that Group 2 nurses will have preceptors, who participated in the preceptor education course, while Group 1 will have preceptors, who did not participate in the preceptor education course.

Subject Protection

New graduate nurses will be given a written explanation of the study. Participation is voluntary and nurses will be assured that participation did not affect employment and that confidentiality would be respected. Each new graduate nurse will be given an identification and group number to protect confidentiality. These will be kept locked in a file cabinet and will only accessible to the researcher.

Methods

A quasi-experimental design will be used in this study. There will be two groups. Group 1 will contain new nurse graduate group, who have preceptors, who did not attend the preceptor education program. Group 2 will contain new nurse graduates, who attended the preceptor education program.

Quantitative data will be collected from the results of the California Critical Thinking Skills Test (CCTST) by Facione, Facione, Blohm, and Giancarlo, 2002. The CCTST Form 2000 will measure critical thinking among the new graduate nurses. It is a
standardized 34 item, multiple choice test written in English with no technical vocabulary. The test was designed to measure three critical thinking skills of post-secondary education students; analysis, inference, and evaluation. It also has two subgroups that are scored: induction and deduction. Internal consistency reliability for the Form 2000 ranged from 0.78 to 0.80. The CCTST will be administered at the end of both groups preceptor-facilitated orientation using the Form 2000 guidelines.

All nurse preceptors will attend a 3 hour education program (Precepting in the Fast Lane) that is designed to help preceptors integrate and facilitate critical thinking with the new graduate nurses. This educational program is designated as the preceptorship. Demographic and background questionnaires will also be used to obtain descriptive statistics.

**Data analysis**

The CCTST total scores, percentile rank using norm referenced values, and scores on each of the subscales will be analyzed using SPSS software. Paired t-tests, chi-squared tests, and analysis of covariance will be used to compare scores between the control and experimental groups of preceptees.

**Summary**

The purpose of this study is to see if a research-based, theory-driven preceptor educational program can improve new graduate nurses’ ability to critically think. The CCTST will be used to measure the control and experimental groups critical thinking skills before and after the preceptor education course is utilized. The preceptor is the person that spends the most time with the new graduate and the new nurse’s main resource. It is practical to hypothesize the preceptor would have a great impact on that
new nurses ability to develop critical thinking skills. For this and numerous other reasons the preceptor should be one that is receptive to questions, easy to approach and that is willing to facilitate critical thinking in the new nurse. This is essential not only for the growth of the nurse but for best patient care.
References


