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Effects of Education on Rural Emergency Department Preceptors' Self-Efficacy and Knowledge

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Abstract

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MSN, Walden University, 2017

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

The Emergency Nurses Association recommends nurse preceptorship programs for emergency departments (EDs) to give nurses the skills needed for precepting new nurses; however, many rural areas do not have nurse education for preceptorship, and no standardized training is available for preparing preceptors for their roles. Rural ED preceptors therefore lack knowledge and skills needed for precepting new nurses. The purpose of this study, guided by Benner's skill acquisition and self-efficacy theory, was to determine if there were significant differences in 33 rural ED nurse preceptors' knowledge and self-efficacy after they completed an online informational PowerPoint presentation. The PowerPoint education program developed by Garner and Kaldawi served as the 4-module educational program. A quantitative pretest and posttest design was used to determine if the educational program improved participant knowledge and self-efficacy. Parson's preceptor self-efficacy scale was used to assess changes in self-efficacy while Smedley's knowledge, teaching, and learning scale was used to assess changes in preceptor knowledge. The sample consisted of 33 Northeast US rural emergency nurse preceptors. Results of a Wilcoxon signed rank test used to compare the differences between pre and post preceptor knowledge and self-efficacy revealed statistically significant improvements in knowledge and self-efficacy ($p < 0.05$). Post evaluations of the educational PowerPoint were largely positive with over 70% believing the PowerPoint education improved their knowledge and 72.7% describing the informational PowerPoint as effective in the online format. Future research with a larger sample size is recommended. Results may promote positive social change by supporting the need for standardized preceptor education, especially in rural areas.

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Dedication

I dedicate this to my little girl Ellie, who no matter what I was doing or working on always brought a smile to my face. I also dedicate this to my parents, who taught me the importance of education and continuing to learn throughout one's life. I thank them all for their love and support throughout this journey.

Acknowledgments

First, I want to acknowledge my family, who supported me throughout this process. My parents who instilled a love of education and the need to continue to learn and grow as a person and as a nurse. To my sisters, who continuously gave me the support and let me talk things through with them during all of my classes and throughout this journey.

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Chapter 1: Introduction to the Study

Introduction

New and inexperienced nurses need quality orientation provided by experienced nurse preceptors to be able to function within their clinical role. Currently, the problem is nurse preceptors are not prepared and lack confidence in terms of their knowledge, abilities, and skills. The Emergency Nurses Association (ENA, 2018) recommended nurse preceptorship programs for emergency departments (EDs); however, many rural areas do not have these programs. Orientation is necessary especially within EDs due to high-stress areas where patient quantity and acuity fluctuate daily. These programs are important because they help new nurses acclimate to their new role as practicing nurses.

New graduate nurses are not prepared or educated to function in critical care roles, but are placed in them due to the nursing shortage. Proper orientation can help prepare them for this role and because of this, it is important for appropriate resources to be used. One way to ensure the success of new graduate nurses is to provide a comprehensive orientation regarding the new role of emergency nurses.

The rural nursing force is comprised of over 50% associate degree prepared nurses who may lack formal education on learning principles needed when they are in charge of educating others (Health Resources and Services Administration, 2013; Newhouse et al., 2011; Urlich et al., 2010). Because of lack of advanced education, it is imperative that these preceptors be educated regarding necessary principles of learning, education, assessment of critical thinking skills, and feedback skills in order to perform their roles effectively.

The better the nursing orientation, the higher the retention rate for new nurses, which is important because replacing one nurse costs around $92,442 and replacing a specialty area nurse costs around $ 145,000 (Horton et al., 2012; Nursing Solutions Inc.(NSI), 2016). Because proper orientation can improve this issue, it is important for appropriate resources to be used. One way to ensure the success of new graduate nurses is to provide comprehensive orientation for new roles of emergency nurses taught by experienced preceptors.

These nurse preceptors are essential because they help new nurses acquire knowledge and skills necessary within their field, while also furthering their critical thinking skills (Watkins et al., 2016). Patient outcomes have also shown improvements after preceptorships are implemented in clinical areas (Cotter & Dienemann, 2016; Urlich et al., 2010). Additionally, it is essential for ED nurses to be trained appropriately so there are no delays in patient treatments (ENA, 2018).

The purposes of this study are to determine if an online nurse preceptor informational PowerPoint presentation affects knowledge levels of ED nurse preceptors who work in a rural area and self-efficacy levels of rural ED nurse preceptors. Outcomes of this research can help improve preceptor skills and lead to additional research regarding how to best educate nurse preceptors in rural critical care areas. By improving the education of new nurses in these areas, this can improve their critical thinking abilities and self-efficacy, which can lead to better patient outcomes. Self-efficacy is a measure of an individual's belief in their own abilities to deal with specific situations. This study could contribute to positive social change in rural areas by improving the

education of nurses new to EDs. This improved education can lead to enhanced critical thinking and improved clinical abilities and critical thinking of new ED nurses. This may result in improved safety and clinical outcomes for patients admitted to rural EDs.

Chapter 1 includes the background, problem statement, purpose, research questions, hypotheses, theoretical and conceptual frameworks, the nature of the study, definitions of terms, assumptions, scope and delimitations, limitations, and significance of the study.

Background

Preceptors are essential in the educating of new clinical nurses. They enhance the learning of their preceptees, while also giving them support, helping them integrate into the workplace culture, and improve their skills competence (Nielson et al., 2017; Tiew et al., 2017). Preceptor programs have also been shown to improve self-efficacy and learning outcomes in nursing students (Rambod et al., 2018). In addition, preceptorships have been shown to improve job satisfaction among new graduate nurse practitioners compared to those who did not have formal postgraduate education (Bush & Lowery, 2016).

Even though it is essential, there is no standard education for preceptors, and many feel they have inadequate preparation for their role. Job education is one of the factors that critical care nurses say influences their job satisfaction (Mousazadeh et al., 2019). Clinical nurses who take on the role of preceptor may or may not have the education necessary to perform their roles effectively depending on their previous education. Panzaveccchia and Pearce (2014) said that United Kingdom preceptors had no

preparation or education for their new role, and felt ill-prepared for their roles as educators. Senyk and Staffileno (2017) found that after preceptor education was implemented, there was increased satisfaction, increased knowledge, and decreased turnover as well as cost reductions. In addition, preceptor classes have been shown to decrease stress levels, improve relationships with their preceptees, and improve new graduate nurse retention rates (Kang et al., 2015). Preceptor classes improve preceptors' knowledge and teaching abilities and give them a deeper understanding of their roles and confidence to perform their jobs (Mitchell et al., 2018; Sanford & Tipton, 2016). Preceptor classes have also been shown to increase preceptor self-efficacy and knowledge after a class has been taken (Parsons, 2007; Smedley et al., 2010; Zahner et al., 2009). After taking preceptor classes, preceptors reported gaining efficiency in their role and implemented new critical thinking strategies in their practice (Cotter & Dienemann, 2016).

Preceptor education classes help improve both hospital and patient outcomes (Cotter & Dienemann, 2016). Specifically it was found that after a preceptor education class was implemented in a hospital, the next year patient falls decreased by 5%, medication errors decreased from 631 to 391, and hospital-acquired pressure ulcers decreased from 1.02 to 0.72 hospital-acquired pressures ulcers per 1,000 patient days (Cotter & Dienemann, 2016). However, the hospital also reduced the nurse patient ratio from 1:8 to 1:6 in the hospital, which could have also improved patient outcomes (Cotter & Dienemann, 2016).

When exploring literature, it was found that most studies were in large teaching hospitals. None of the studies looked at small rural hospitals and the effect of precepting classes on preceptors. Rural hospitals lack economic and financial resources and the ability to obtain new nurses (Moscovice & Stensland, 2002). Because of this, it is essential to provide the support, time, and money to retain nurses. There is no standard preceptor orientation program for ED staff in rural hospitals in the eastern region of the US. This research addressed this gap by specifically focusing on ED preceptors' knowledge and self-efficacy in terms of implementing the ENA program in rural EDs. This study was needed because these clinical preceptors have unique challenges they must overcome.

Problem Statement

The research problem was lack of knowledge and skills of rural ED preceptors due to the lack of standardization of precepting education. The ENA recommends nurse preceptor education; however, many healthcare systems do not have preceptor education in place, especially in rural areas, due to lack of resources. EDs require nurses who are highly skilled and have critical care knowledge, and as a result, new graduate nurses need extensive orientation regarding EDs before independent practice in the ED setting. In addition, the COVID-19 pandemic and lack of inpatient beds has increased ED visits, resulting in high acuity patients being seen and held for extended times in the ED and waiting rooms.

The US has around 130 million ED visits annually (CDC, 2017). Rural areas saw an increase of more than 50% of visits, which was a larger increase as urban ED and rural

areas typically have more trauma injuries resulting from motor vehicle or farm equipment accidents (Greenwood-Ericksen & Kocher, 2019). ED nurses treat patients who are suffering from life-threatening injuries, trauma, and severe medical conditions which require immediate treatment. These nurses work in crisis situations and must be able to quickly identify best ways to stabilize patients and minimize their pain. Due to their demanding work, the ENA has recommended a nurse preceptorship program for nurses new to EDs, which includes a section on education regarding triage principles. Preceptorships are essential to educate nurses new to emergency nursing, and when preceptors are implemented in clinical areas, patient outcomes have improved (Cotter & Dienemann, 2016). As the COVID pandemic continues, rural areas are faced with increases in emergency medical services (EMS) transfers and hospitals which are at capacity and face the burden of having fewer resources and hospital personnel to provide care for the influx of complex patients (Lakhani et al., 2020; Lasater et al., 2020; San et al., 2020).

Even though the ENA recommends nurse preceptorship programs for ED nurses, many rural EDs do not have a formal preceptorship program. Rural facilities have a higher percentage of associate degree nurses who act as preceptors to new hires. Within rural areas, 53.9% of their nursing workforce hold associate degrees, whereas only 46.1% hold bachelor's degrees compared to urban areas, which have 42.1% associate degree nurses and 57.9% bachelor's prepared nurses (Probst et al., 2019). Few of these nurses have formal education regarding principles of learning that support critical thinking, which is an essential skill in the ED (Newhouse et al., 2011; Urlich et al., 2010). Their

associate degree programs do not include education about precepting, educating, and evaluating new hires. The knowledge base may be limited, increasing the risk that precepting they provide may not be evidence-based or include best practices for developing critical thinking skills. Successful onboarding programs in specialty areas have been shown to improve nurse satisfaction and nurse retention (Bratt, 2009; Pasila et al., 2017; Sandau et al., 2010). This is particularly important in rural areas, which often experience nursing shortages due to fewer schools and lack of ability to compete financially with salaries that larger urban communities offer (Burrows et al., 2012).

Clinical preceptors are an important part of healthcare. The better the nursing orientation is, the higher the retention rate for new nurses (Horton et al. 2012; Watkins et al., 2016). Preceptors help bridge the gap of theory to practice in nursing and help new nurses become proficient in their nursing roles while helping them acquire essential knowledge and skills (Melrose et al., 2015; Pasila et al., 2017; Watkins et al., 2016). According to Ulrich et al. (2010), decreases in medication errors happen after a preceptor program is implemented. Besides improving patient outcomes, clinical preceptors also help socialize nurses to their environment and give them valuable social support in their units to help them succeed (Earle-Foley et. al., 2012).

The gap in research is that currently, there is no standard preceptor orientation program for ED staff in rural hospitals in the eastern region of the US. This research addressed this gap by specifically focusing on ED preceptors' knowledge and self-efficacy in terms of implementing the ENA program in rural EDs. Information gained

from this research could help support preceptor education and influence rural hospitals' allocation of resources.

Purpose of the Study

The purposes of this quantitative study were to determine if an online nurse preceptor informational PowerPoint presentation affects the knowledge and self-efficacy of rural ED nurse preceptors. The goal was to provide support for the implementation of the program by addressing the role of the preceptor, best practices in teaching and mentoring, and development and assessment of critical thinking skills through the use of surveys. This study involved using a one-group pretest posttest quasi-experimental research design. A de-identified paired *t*-test was used to compare both subjects' knowledge and self-efficacy before and after the education course. Each participant selected a unique identification code for the pre/posttest.

The online nurse preceptor informational PowerPoint used the Supportive Learning for Clinical Preceptor I Course and Clinical Coaching Education Program for Clinical Nurse Educators program developed by Garner and Kaldawi (2020) as well as added validated material on triage precepting by the ENA. This validated program was used for rural emergency department preceptors. The program was an online PowerPoint presentation that consisted of information about the role of the preceptor, triage education, teaching styles, learning styles, critical thinking in emergency situations, and feedback and evaluation. Impact on knowledge was measured using the knowledge of teaching and learning scale (KTL; see Appendix D). Self-efficacy was measured using the validated preceptor self-efficacy survey developed by Parsons (see Appendix B).

SurveyMonkey was used to distribute surveys. Individuals registered with a passcode of their own choosing to keep responses confidential.

Research Questions and Hypotheses

The following questions and hypotheses were used for data analysis:

RQ1: Are there significant differences in terms of rural ED nurse preceptors' knowledge posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest?

$H_0$1: There are no statistically significant differences in terms of rural ED nurse preceptors' knowledge posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest.

H_a1: There are statistically significant differences in terms of rural ED nurse preceptors' knowledge posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest.

RQ2: Are there significant differences in terms of rural ED nurse preceptors' self-efficacy posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest?

$H_0$2: There are no statistically significant differences in terms of rural ED nurse preceptors' self-efficacy posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest.

H_a2: There are statistically significant differences in terms of rural ED nurse preceptors' self-efficacy posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest.

The viewing of the online nurse preceptor informational PowerPoint was the independent variable; the dependent variables were the preceptor's knowledge obtainment and self-efficacy. Knowledge obtainment was evaluated via a self-assessment test by Smedley et al., (2010) to answer Research Question 1. Self-efficacy was measured by Parson's preceptor self-efficacy tool, to answer Research Question 2. Descriptive statistics were collected using a demographic questionnaire, to collect data on the subjects' education level, years of experiences as a nurse, years of preceptor experience, and sex of the subjects. Individuals registered with a passcode of their own choosing to keep their responses confidential. The participants entered this number on their demographic data, pre-test, and post-test.

Framework

The theoretical basis for this study were Patricia Benner's skill acquisition theory and the self-efficacy theory. The conceptual model for the education program was Knowles' adult learning theory. Kirkpatrick's model for evaluation of continuing education was used for the evaluation model for outcome assessment. Benner's skill acquisition theory involves measuring healthcare professionals' progression, skills, and competence. Benner (1982) said nurses develop their skills over time through their firsthand experience and education. Nurse preceptors need to have communication skills, conflict resolution skills, and knowledge of learning and teaching to be able to perform their roles (Sandau et al., 2010). Self-efficacy is the belief one has that they can perform actions to manage future situations and achieve specific goals (Stumps, et al., 2012). Self-efficacy in nursing is important because it is how nurses deal with prospective situations,

while also becoming competent in clinical settings (Ke et al., 2017; Kim & Kim, 2019). People who have self-efficacy have the attitude to continue to learn. Individuals who have self-efficacy are willing to do the preceptor educational program and see the benefit of the program and how it will support them in their nursing career.

Knowles' adult learning theory was used in designing the education program as well as the conceptual model for this study. This theory involves the way adults learn, their motivations for learning, and how their experience influences their learning (Knowles, 1977; Knowles, Holton, & Swanson, 2015). Adult learners are self-directed and motivated by internal factors to learn. Because of these characteristics, the education nurse preceptors receive should be tailored to their experiences and provide them with motivation to perform their preceptor roles and tools they need to succeed.

Kirkpatrick's model for evaluation of continuing education is the evaluation model which was used in this study. Kirkpatrick's model involves determining and evaluating results and effectiveness of educational programs (Praslova, 2010). There are four levels of this model: reaction, learning, behavior, and results. Preceptors were asked to provide feedback regarding the quality of education, improvement of knowledge, and improved self-efficacy after online education was administered.

Nature of Study

The nature of this study was quantitative with a quasi-experimental research design. I used purposeful sampling and snowball sampling. A de-identified paired *t*-test was used to compare subjects' knowledge before and after the informational PowerPoint presentation using SurveyMonkey. Self-efficacy was measured using the preceptor self-

efficacy scale developed by Parsons. A northeastern nursing Facebook group was used to recruit participants. Administrators of the group were emailed with a message asking they post information outlining the purpose of the study to ED preceptors as well as inclusion criteria. Administrators then posted the link to the survey and educational material to the Facebook group. Individuals registered with a passcode of their own choosing to hide their identity. All participants had one year of emergency nursing experience, were currently working in the ED, held an active RN license, and precepted a nurse within the last year. IRB approval from Walden University was obtained before any data were gathered and informed consent was obtained from subjects before the study commenced. Data were analyzed using SPSS 25 software, and descriptive statistics and paired *t*-tests were completed.

I obtained primary data through validated and reliable instruments such as a rural northeastern hospital system's Continuing education evaluation for provider-paced activities survey, Smedley et al.'s change in knowledge of teaching and learning, and Parson's self-efficacy scale. Permission was obtained from authors of these instruments for their use in this study. SurveyMonkey links to these instruments were posted on the northeastern nursing Facebook page. To be a part of this Facebook group, members must be an ED nurse in the Northeastern region of the US. The only identifying data collected from subjects was their email addresses. These were kept confidential. Data were collected before and 4 weeks after education was presented via an online PowerPoint presentation. The informational PowerPoint presentation was tailored to ED needs and based on an already established preceptor-educational program. This program was

utilized in a previous study with a different population, which evaluated whether the educational program improved the coaching behaviors of clinical nurse educators (CNE). Thirty-six clinical nurse educators from two different diploma schools were recruited to participate in the study (Kaldowi, 2020). Of the participants, 88% of them held a master's degree and 78% of those master's degrees were in nursing education. From the study, it was found that the educational program did improve the CNEs ability to engage their students and help them synthesize their knowledge during their clinical time (Kaldowi, 2020). It was also found that by engaging in this educational class, it motivated the CNEs to use the information in their clinical teaching.

Definitions

Operational definitions for terms used in this study include:

Competence: Competence is the ability of a nurse to do something successfully without the need for supervision (Garside & Nhemachena, 2013). Nurses become competent when they acquire skills, are knowledgeable, and have attitudes which are necessary to fulfill their roles (Garside & Nhemachena, 2013). In the ED, competence is acquired during orientation and through the gaining of new skills and experience of new situations which require being competent when they are on their own. Preceptors must be competent in terms of their teaching abilities and within their new roles in order to help successfully orientate new nurses properly in the ED.

Experience: Experience is observations or participation in an activity to gain knowledge (Mchugh & Lake, 2010). Experience involves when nurses reflect on their encounters and perfect their decision making at an instinctive level (McHugh & Lake,

2010). Preceptorships use this when new nurses observe and directly participate in patient care under the supervision of their preceptor. These preceptors also help new nurses engage in clinical competencies.

Nurse Preceptor: A nurse preceptor is an individual with clinical experience who educates new nurses during their orientation (Mann-Salinas et al., 2014; Sandau et al., 2010; Sanford & Tipton, 2016; Senyk & Staffileno, 2017; Ward & Mccomb, 2017). The roles of the preceptor are to facilitate and evaluate learning, provide appropriate feedback, socialize new nurses onto the unit, and help new nurses acquire necessary clinical skills in order to efficiently transition into their new role as staff nurses (Barker & Pittman, 2010; Billay & Yonge, 2004). Preceptors are organized, have optimistic attitudes, model professional behavior, are able to appraise new nurses, promote critical thinking skills, and help integrate new nurses into the social network of the unit (Rebholz & Baumgartner, 2015).

Preceptee/Orientee: An inexperienced and qualified nurse who is new to the profession or is in a new field and is being trained by a preceptor (Ulrich et al., 2010).

Preceptorships: Preceptorships are time defined one-on-one relationships within formal programs that evolve over time to facilitate experiences (Ward & McComb, 2018).

Rural EDs: According to the American College of Emergency Physicians (ACEP, 2017), rural EDs are in areas with low population concentrations who provide critical services to their community by evaluating, stabilizing, initializing treatment, and organizing transfer of care to tertiary facilities if necessary.

Self-efficacy: The belief one has that they can perform actions to manage future situations (Bandura, 1993; Stumps, et al., 2012). This allows the individual to feel that they can achieve specific goals and produce positive outcomes (Kitching et al., 2011).

Assumptions

Assumptions are aspects of the study that are believed but cannot be demonstrated to be true. One assumption was education of rural ED nurse preceptors improved their ability to work with preceptees. A second assumption was rural ED nurse preceptors who are educated according to ENA standards and have the tools to perform their job will become competent in their new educator roles. The third assumption for this study was that Rural ED nurse preceptors were expert clinical nurses who do not have the specialized skills (such as evaluation techniques and understanding of different learning styles) to assume the preceptor role without preparation. Another assumption was that the quality of care rural ED patients received will improve after rural ED nurse preceptees are oriented by educated preceptors. I also assumed that preceptors wanted to assist and teach their preceptees during their relationship. I also assumed that the environment in which the preceptorship took place was conducive for relationships and preceptors were given organizational support. In this study, I assumed that orientees who had educated preceptors had an enhanced orientation process compared those whose preceptors were not educated. The final assumption I made was that all participants told the truth when answering questions.

Scope and Delimitations

The scope of this study was quantitative. Knowledge obtainment was assessed before and after the program using the KTL. Self-efficacy was measured using Parson's preceptor self-efficacy tool before and after the program as well. Educated preceptors help increase new nurse retention, which can decrease rural hospitals' costs while also improving retention and confidence of new graduate nurses (Loiseau et al., 2003; Piccinini et al., 2018). Furthermore, preceptors help increase new graduate nurses' skills, knowledge, and competency as clinical nurses, which can lead to improved patient outcomes (Nielson, 2017).

A delimitation of this study was that all participants were members of a Facebook group that is located in the Northeastern US. Each subject was asked to take the pre- and posttest surveys. All participants had at least one year of emergency nursing experience, currently work in the ED, hold an active RN license, and precepted a nurse within the last year. Generalizability of results of this study is limited to rural ED nurses who are part of this Facebook group.

Limitations

A potential barrier involves the recruitment of participants and response rates from participants, particularly in terms of timing of the COVID pandemic and its impact on EDs. This could have potentially decreased the number of participants and responses. Another limitation was the possibility of internal validity problems due to lack of random sampling. Subjects were preceptors who fit the inclusion criteria, which could have led to internal validity problems, such as selection bias. A possible bias in this study was the

separation of roles (researcher versus group member). Another potential barrier was limiting the study to one nursing specialty and location, which leads to issues regarding generalizability of this study to other nursing specialties and US locations.

Significance

Evidence from the nursing literature supports strong nurse specialty orientation and residency programs. These programs are effective in terms of improving retention rates and satisfaction among new graduate nurses in large teaching hospitals; however, there is a lack of information regarding rural preceptor education and preceptor satisfaction (ENA, 2015; Horton et al., 2012; Kang et al., 2015; Watkins et al., 2016). Cotter and Dienemann (2016) said that proper orientation improves patient outcomes and safety. According to the ENA (2018), it is vital for emergency nurses to be trained appropriately and develop critical thinking skills necessary to triage patients to provide appropriate and safe care. ED nurses who are not trained or properly prepared can lead to incorrect triage and delays in patient treatment as well as poor patient outcomes (ENA, 2018, Ekins & Morphet, 2015; Ryan et al., 2019). As nurses with higher self-efficacy are more competent in clinical settings and have better critical thinking skills than those who do not (Ke et al., 2017). This study is unique because it addressed the under researched area of preparation of clinical educators in rural hospitals with a focus on EDs with unique challenges. A follow-up study could evaluate actual preceptor performance and new nurse satisfaction with their roles.

This research can help improve preceptorship skills of nursing staff and improve ENA-recommended orientation materials. In addition, it could lead to more research

about how best to educate clinical nurse preceptors working in rural communities. Results could support the need for standard preceptor education and allocation of resources for the education of preceptors.

This study could contribute to positive social change in rural areas. Quality of preceptor knowledge and skills has an impact on role adaptation and critical thinking in various settings. Improving the education of nurses new to EDs can lead to improved clinical abilities and critical thinking of new hires. This may result in improved safety and clinical outcomes for patients admitted to rural EDs.

Summary

As the Baby Boomer generation is nearing retirement, there will be a shortage of experienced nurses. Because of this, hospitals will be forced to hire new nurses who may lack knowledge and experience, especially in high acuity areas such as EDs. Nursing preceptors are tasked with orientating these new nurses and guiding them to become competent bedside nurses. Properly educated preceptors are shown to improve nursing satisfaction, retention, and overall skill sets of new nurses in larger teaching hospitals (Watkins et al., 2016). By contrast, rural hospitals are faced with challenges such as fewer economic resources and recruiting and retention issues, leading to a smaller pool of nurses to choose from to precept (Halstead & Frank, 2011; Sroczynski et al., 2012). Rural nurses are comprised mostly of associate degree prepared nurses who may not have the proper education or tools to adequately precept others (HRSA, 2013; Newhouse et al., 2011; Urlich et al., 2010). Accordingly, it is vital to provide them with proper orientation. Few studies have examined rural nurse preceptors and their self-efficacy and knowledge,

which is what this study aimed to address. This quasi-experimental study was conducted to determine the effect a preceptor informational PowerPoint presentation had on preceptors' knowledge and self-efficacy. The study's findings may contribute to more research on how best to educate clinical nurse preceptors working in rural communities and standard preceptor education as well as allocation of resources for the education of preceptors. Chapter 2 includes the literature search strategy, theoretical and conceptual framework, and a comprehensive literature review involving preceptors, preceptees, knowledge, and self-efficacy.

Chapter 2: Literature Review

Introduction

The US is experiencing a nursing shortage due to the aging of the workforce (Halstead & Frank, 2011). This shortage can cause patient safety problems and burnout among remaining nurses due to overtime hours (Sroczynski et al., 2012). This nurse shortage necessitates that new nurses be given resources be successful in order to help improve the retention of nurses. One way to do this is to provide extensive orientation education for nurse roles. Orientation to a new role is necessary so an individual does not feel overwhelmed by the expectations of the new role (Anderson, 2009; Grassley & Lambe, 2015; Mann-Salinas et al., 2014). Chapter 2 includes the literature search strategy and previous literature regarding preceptors, the impact of preceptors on the hospital system and preceptees, preceptees' experiences, preceptors' experiences, effects of preceptor classes on preceptors, teaching characteristics, knowledge, self-efficacy, and the theoretical foundation for this study.

Literature Search Strategy

The literature search was conducted through the Walden University Library, Google Scholar, and ENA. A Thoreau multidatabase search was conducted to locate articles pertaining to nurse preceptor education. This search was limited to articles in the English language that were peer-reviewed and published between 2010 and 2020. Keywords were *preceptor*, *education*, *preceptor education*, *education*, *preceptor class*, *satisfaction*, *preparedness*, *self-efficacy*, *knowledge*, *rural*, and *rural emergency department*. Databases included EBSCOHost, Google Scholar, CINAHL, Medline,

PubMed, and Cochrane. Articles and abstracts were reviewed and studies were included if relevant to the topic. Irrelevant articles were excluded. In addition, I reviewed reference lists of articles for potential inclusion in the review, then located these additional studies and reviewed abstracts for relevance. If articles were deemed relevant to the study, they were included in the review.

Theoretical Foundation

Benner's Skill Acquisition Theory

The theoretical basis for this study was Patricia Benner's skill acquisition theory. Benner's skill acquisition theory involves measuring healthcare professionals' progression, skills, and competence (Benner, 1982; Gobet & Chassy, 2008; Kowitlawakul, 2013). Benner's skill acquisition theory is a middle range theory used throughout healthcare, which states nurses develop their skills over time through their firsthand experience and education.

Benner (1982) categorized nurses based on their competence with a novice nurse being defined as having no experiences in situations. These types of nurses tend to be task-oriented. Novice nurses are nursing students and new graduate nurses. Advanced beginner nurses are those nurses who demonstrate acceptable performance in real nursing situations; however, these individuals still require help from experienced nurses or preceptors (Benner, 1982). The third type of nurse is the competent nurse; these nurses start to analyze problems, set long-term goals, and recognize patterns (Benner, 1982). This group is organized, efficient, and able to analyze what patient conditions need immediate attention and what can wait. Next, proficient nurses are those who take in

information as a whole and have a deep understanding of situations (Benner, 1982). These nurses have advanced critical thinking and decision-making skills. Lastly, expert nurses are those who have a large amount of experience and deep understanding of situations (Benner, 1982). Nurse preceptors need to have communication skills, conflict resolution skills, and knowledge of learning and teaching to be able to perform their roles (Sandau et al., 2010).

This theory has been used throughout nursing. Marks-Maran et al. (2103) said preceptees valued preceptors and preceptors helped decrease the amount of stress preceptees felt. Preceptors improved preceptees' communication skills, clinical skills, and personal and professional development. Preceptees also felt that the educational program was beneficial and were interested in becoming preceptors in the future. Nielsen et al. (2017) examined how preceptorships can be used to help new nurses learn and develop competencies as clinical nurses. Preceptees were all nurses with experience as a nurse but were new to the unit (Nielsen et al., 2017). All subjects had a differing amount of experience as a nurse. After 28 observations, the researchers interviewed the preceptors and preceptees separately. Nielsen et al. (2017) found three main themes: being together, doing together, and getting along together. All three of these themes had to be present for learning to take place. When the preceptor and preceptee were in the same room, there was enhanced learning (Nielsen et al., 2017). When the preceptor and preceptee performed their nursing duties together, there was enhanced independence and communication. When preceptors and preceptees had a positive relationship, they were more focused on patients (Nielsen et al., 2017).

Other studies have not looked at how relationships between preceptors and preceptees influences the competence of preceptees. By showing that preceptors help increase competence, this shows the importance of the need for preceptors and providing them with the preparation and support they need. Nurses must progress in terms of their skills to advance as practicing nurses (Haag-Heitman, 2008). All nurses start at a novice position and through their experience and education progress through the stages of Benner's model. In addition, nursing preceptors who are new to teaching role must progress as well as they learn new skills and gain expertise needed to precept other nurses (Sandau et al., 2010). Research has been conducted on the education of nursing preceptors, and has found there is no standard approach. This reduces their satisfaction with their roles (Mann-Salinas et al., 2014).

Self-Efficacy Theory

Self-efficacy is the belief one has that they can perform actions to manage future situations and achieve specific goals (Stumps et al., 2012). Self-efficacy in nursing is important because it is how nurses deal with prospective situations, while also helping nurses become competent in clinical settings (Ke et al., 2017; Kim & Kim, 2019). The self-efficacy theory is a psychological theory by Albert Bandura. Self-efficacy influences what kind of behavior an individual has when he or she is confronted with stress and challenges. Self-efficacy and outcome expectancies determine a person's behavior. This theory also explains how much effort an individual will put to reach their goals. Bandura stated there are four factors that affect self-efficacy. The first factor is a person's experience and mastery. The second factor is modeling and it is where someone observes

and tries to imitate a role model. The third is social persuasion, which is discouragement or encouragement an individual receives from someone else. The fourth factor is physiological symptoms that one has when they experience stress or are in challenging situations.

Preceptors need to have self-efficacy in order to deal with different situations and challenges that may arise during their roles. Self-efficacy is associated with job satisfaction and intent to stay in a profession (Lee & Ko, 2010). Parsons (2007) examined differences in mean self-efficacy and knowledge scores before, immediately after, and one month after the completion of an online education program for public/community health nurses. There were 48 nurse preceptors from Iowa, Minnesota, Nebraska, North Dakota, and Wisconsin. Online education contained modules regarding the preceptor role, learning and teaching styles, critical thinking, challenging situations, and feedback and evaluation. To measure subjects' knowledge, a 32 multiple choice question knowledge test was developed based on the online education program. To measure self-efficacy, a 21 question Likert Scale was used. This instrument was used to rate preceptors' confidence in terms of performing behaviors associated with their roles, learning and teaching styles, critical thinking, challenging situations, providing feedback and evaluation, and overall confidence in precepting nursing students (Parsons, 2007). The mean age of the preceptors was 46, mean years of nursing experience was 22.5 years, and there was a mean of 6.2 years for those with experience precepting.

Parsons (2007) found that 60.4% of subjects had no formal preceptor education. A one-way repeated measures ANOVA was used to compare self-efficacy scores of

subjects at three different periods (pre, post, and delayed post). There was a statistically significant difference between the pretest and immediate posttest ($p<.01$) as well as between the pretest and delayed posttest ($p<.01$). There was a statistically significant difference between pre and post knowledge ($p<.01$) and the pre and delayed posttest knowledge scores ($p<.02$). There was no relationship between self-efficacy and knowledge scores at any of the three different time periods data was collected. In addition, total years as a preceptor, preceptor age, and employment were not statistically related to self-efficacy scores; however, having previous preceptor education was correlated with self-efficacy ($p<.01$) in terms of immediate and delayed posttest scores, with those who had previous preceptor education scoring higher (mean of 3.5 compared with 3.8). (Parsons, 2007). Also, statistically significant differences were found related to level of education, with nurses with master's degrees having higher immediate (mean of 3.82 compared with 3.51) and delayed self-efficacy scores (mean of 3.79 compared with 3.53) compared to those who had bachelor's degrees. Taking the educational course significantly increased preceptor knowledge and self-efficacy among community health nurses (Parsons, 2007). Zahner et al. (2009) addressed the impact of using an online continuing education course to increase the knowledge and self-efficacy of nurse preceptors. Online courses involved information about the role of the preceptor, course expectations, policies and procedures, learning style and teaching styles, critical thinking, interdisciplinary practice, cultural competence, challenging situations, and feedback and evaluation. Quizzes were given, and the subject had to receive 75% or higher on them to receive credit for continuing education (Zahner et al., 2009). There was a statistically

significant knowledge gain between pre-test and post-course as well as pretest to the follow-up survey. However, knowledge declined between the post-course and follow-up survey, but it was not statistically significant (Zahner et al., 2009). There was no statistically significant change in self-efficacy and subjects were satisfied with the course.

In relation, Sandau et al. (2010) conducted a mixed method study a quantitative study and used a quasi-experimental design to examine the effects an 8-hour preceptor educational program had on preceptors and preceptees. The study used a self-report of pre- and post-class self-confidence of preceptors, while also giving the survey to preceptors from the previous year who did not have the class to compare the results too. The aim of the study was to examine the effects the preceptor education had preceptor's confidence and comfort with their role, preceptees' confidence and satisfaction with preceptors, and retention of the preceptees (Sandau et al., 2010). The educational course taught preceptors about the different levels in Benner's theory and how to tailor their teaching to their preceptees level in Benner's theory. They also learned the definition of critical thinking and were told how to help develop a student's critical thinking. The course also discussed the different roles of the preceptor (educator, socializer, and role model). The researchers also used four different cohorts as samples: past preceptors, current preceptors, past orientees, and current orientees (Sandau et al., 2010). The past preceptors and past orientees were not given the educational intervention, whereas, the other cohort of current preceptors and orientees were. The researchers used both paired and independent *t*-tests to analyze their data. Sandau et al. (2010) found that the preceptor course increased preceptors' confidence and comfort in the precepting role,

there was increased confidence and satisfaction of orientees who had preceptors that went to the class, and there was increased retention of orientees after the initiation of the preceptor class. An interesting finding of this study was that preceptees who had three to four preceptors reported the highest satisfaction with their preceptors (Sandau et al., 2010). This study was completed in one large Midwest hospital that had 926 beds and surveyed nurses from all units within the hospital, excluding nurse educators and managers. It also had Low response rate of 30% for past preceptors and 44% for current preceptors.

Rambod et al. (2018) conducted a study to examine the effect a preceptor program had on self-efficacy and learning outcomes in nursing students. The researchers conducted a quasi-experimental study using a convenience sampling of 112 nurses from the local nursing school in Iran. All of the subjects were in their fourth year of nursing school and had completed their preceptorship within different specialties. The preceptors who were in charge of educating the subjects all had a 2-day preceptor education. The researchers used the general self-efficacy scale and the perception of overall learning outcomes scale to measure the students' self-efficacy and obtainment of learning outcomes. The researchers analyzed the data using a Pearson's coefficient and linear regression analysis. The researchers found that there was a significant association between self-efficacy and learning outcomes (Rambod et al., 2018). However, there were limitations to this study one being that there was no control group and the sample was a convenience sample, which leads to a decrease in the generalizability of the results of the study. Another limitation was that the self-efficacy was only measured after the

preceptorship, so if is unknown of the preceptorship influenced the self-efficacy scores or if this sample of student nurses had high self-efficacy to begin with.

Smedley et al., (2010) conducted a study to assess whether nurse preceptors who had taken a preceptor class increased their knowledge of the educator role, increased knowledge of preceptor skills, increased their self-efficacy, and if it improved their attitude toward the student nurses they oversaw. The researchers found that preceptor skills were related to an increase in preceptor self-efficacy and there was an increase in preceptor self-efficacy and a change in attitude toward student nurses. Wu et al. (2020) conducted a quasi-experimental pretest posttest study to see if a clinical teaching blended learning program with web-based pedagogy for nurse preceptors had an effect on nurse preceptors' clinical teaching competencies, self-efficacies, attitudes toward web-based education, and blended learning. There were 150 nurse preceptors who participated in this study were from one acute care hospital in Singapore. From the questionnaires used to assess the outcomes, the researchers found that after the program the nurse preceptors scored higher on their clinical teaching competencies, self-efficacy, attitudes towards web-based learning, and blended learning outcomes. This was a beneficial study; however, it is unknown if any of the subjects were in critical care or if they had previous preceptor education prior to being involved in this study.

Adult Learning Theory

The conceptual model for the education program will use Knowles' adult learning theory. This theory was developed by Malcolm Knowles (Merriam et al., 2007).The Knowles' adult learning theory will be utilized in designing the education program. This

theory addresses the way adults learn, their motivations for learning, and how their experience influences their learning (Knowles, 1977; Knowles et al., 2015). Andragogy is adult learning. In this theory, adult learners bring their experiences with them to guide their learning of new material. It believes that teachers facilitate the knowledge development of learners (Billings & Halstead, 2012). Andragogy has five assumptions; which include the learner is self-directing, the learner has a lot of experience, the leaners are ready to learn, learners are motivated to learn after they experience a need to learn, and learners are motivated by internal factors to learn (Knowles et al., 2015). Adult learners are self-directed and are motivated by internal factors to learn. Because of these characteristics, the education nurse preceptors receive should be tailored to their experiences and provide them with motivation to perform their preceptor role and the tools they need to succeed in it.

Knowles's adult learning theory has been used in online educational programs for physical education teachers. (Sato & Haegele, 2017). This online education used multiple types of learning such as blogs, peer evaluations, discussion, and learning planning. By using different educational tools, it allowed the leaners to share their experiences and improve their learning. This type of platform also allowed for collaborative learning and a positive learning environment.

Learning theories guide curriculum development by showing how students and teachers interact, the environment the learning is occurring in, and the subject of the learning (Billings & Halstead, 2016; Keating, 2015). The current study will benefit from this because this conceptual framework explains how adult learners learn and what they

need to succeed. Because of this, this theory will be used throughout the study and in the educational curriculum presented.

Kirkpatrick's Evaluation Theory

Kirkpatrick's model for evaluation of continuing education is the second theory, which will be utilized in this study; it can be used to evaluate the results and effectiveness of an educational program (Praslova, 2010). There are four levels of this model, which include reaction, learning, behavior, and results (Billings & Halstead, 2016). This model evaluates the learning, behavior, and the effectiveness of the education. The first level of reaction evaluates how nurses reacted to the education, if the students believed the curriculum was valuable, the presentation and material were appropriate and helped them understand the content (Praslova, 2010).This is evaluated because it is important to understand how the program can be improved based on the students' observations and feelings. A Likert scale evaluation questionnaire will be utilized to ascertain what the students believed was beneficial from the class and what content of the class needs improvements, or they considered unbeneficial. The second level is learning where the students learning is evaluated to see if they met of all of the learning objectives. The third level is behavior, which evaluates how the students apply the information they have obtained throughout the course and if it changed their behavior. This is accomplished by sending out surveys after a preceptor has orientated a new nurse to both the preceptor and preceptee. These surveys ask about the experiences of the orientation process. Both preceptors and preceptees will write down what they thought went well during the experience and what they thought needed improvement. The fourth and final level is

results, which is the outcomes obtained. This may be accomplished by examining at the retention rates of new ED nurses and the job satisfaction rates over time.

The Kirkpatrick model was used in a study for midwife simulation education. This program used levels 1 and 2. The researchers used a questionnaire after the simulation was completed to measure the reaction of the subjects (Zhao et al., 2019). Level 2 was measured using a pre-test and post-test to measure the subject's knowledge and skills before and after the simulation education. The researchers found that the subjects had a positive reaction to the education and the subject's skills and knowledge increased after it (Zhao et al., 2019). Vizeshfar et al. (2018) conducted a study to evaluate a healthcare education program. This program used all four levels. The researchers used a questionnaire to evaluate the trainers. Level 2 also used a pre-test and post-test to evaluate the learning of the program. In level 3, the researcher observed the subjects' behavior 2 months after they had the education. In level 4, the subjects completed a questionnaire to measure how their behavior affected their results. The researchers found that the subjects were satisfied with the program and the program increased their knowledge and improved their performance (Vizeshfar et al., 2018).

The Kirkpatrick model is designed to provide a framework that will help examine results, help determine the participant reaction to education provided, be beneficial for measuring success, and help lead to program quality improvement. The current study will solely focus on the first and second levels due to time constraints. However, future studies can focus on the long-term evaluation of rural ED preceptor education. In the proposed study, the preceptors will be asked to provide feedback on the quality of the

education, improvement of knowledge, and improved self-efficacy after the online education has been administered. Self-efficacy will be measured using the preceptor self-efficacy developed by Parsons (2007). This instrument rates the preceptors' confidence in performing behaviors associated with their role, learning and teaching styles, critical thinking, challenging situation, providing feedback and evaluation, and overall confidence in precepting nurses (Parsons, 2007).

Literature Review Related to Key Variables and/or Concepts

Preceptors

Preceptorships are time-defined, one-on-one relationships within formal programs that evolve over time to facilitate experiences (Ward & McComb, 2018). Goals of a preceptorship are to help new nurses become proficient in their new role as a practicing nurse; preceptors facilitate learning, evaluate learning, provide appropriate feedback, socialize new nurses onto the unit, and help new nurses acquire the necessary clinical skills to transition into their new role as a staff nurse (Barker & Pittman, 2010). The purpose of precepting is to help ease the transition for new nurses into their unit and nursing practice. Research has shown that the more in depth the nursing orientation is, the higher the retention rate is for new nurses (Horton et al., 2012; Pasila et al., 2017). Preceptors also help bridge the gap of theory to practice in nursing (Earle-Foley et al., 2012). Of new graduate nurses, 65–75% do not meet the expectations for clinical judgement and are unable to translate theory into practice (Ulrich et al., 2010). Having a preceptor gives new nurses the support, time, and guidance to further their clinical thinking skills and their nursing practice (Watkins et al., 2016).

Preceptors have many different roles: planner, role model, facilitator of learning, evaluator of learning, and support system (Horton et al., 2012). The most important role of the preceptor is to help facilitate the transition of a new nurse from student to novice practicing nurse (Mann-Salinas et al., 2013). In addition to helping new nurses transition into practice, nurse preceptors help socialize new nurses into the profession and the work environment, giving new nurses the social support necessary to succeed and feel at ease in the new role (Earle-Foley et al., 2012). Glynn and Silva (2013) found that preceptors were important to socializing and preparing nurses for their role, as emergency room nurses because of the complexity and variety of patients seem in the ED.

Successful preceptorships depend on the quality and effectiveness of the preceptors. Preceptors need to be able to express their knowledge and skills to others (Rebholz & Baumgartner, 2015). Preceptors need to be organized, have strong communication skills, and use a learner-centered curriculum ideology that focuses on teachers who create an environment that is friendly and helps students learn and grow through interactions and their learning preferences (Duncan et al., 2013, Rebholz & Baumgartner, 2015). Preceptors also need to provide frequent and appropriate feedback to their orientees to maintain a positive environment (Rebholz & Baumgartner, 2015). Preceptors must be able to identify learner needs and build trusting relationships with their students. Approachability and strong communication skills can help reduce conflict (Rebholz & Baumgartner, 2015; Zilembo & Monterosso, 2008). Successful preceptors support nurses and model professional behavior for them. Effective preceptors are patient and current on practices, so they can share their knowledge with their students.

Preceptors should be nonjudgmental and should demonstrate how they have learned from their own experience (Rebholz & Baumgartner, 2015). By reflecting on their past experiences with preceptors and teachers, a current preceptor can envision how to act treat new nurses. The most successful preceptors are not always those with the most experience; an expert RN may not succeed as a preceptor if they are unable to express their thought processes to a new nurse they are teaching (Rebholz & Baumgartner, 2015).

Impact of Preceptors

Research has shown that the more in depth the nursing orientation is, the higher the retention rate for new nurses (Almada et al., 2004; Horton et al., 2012; Pasila et al., 2017). The turnover rate in the first year of a nurse's career has been estimated at 20-40% (Horton et al., 2012; Pasila et al., 2017). However, with a preceptorship program, this rate decreases due to increased satisfaction for new nurses who obtained support in their new role and were socialized into their new environment (Cotter & Dienemann, 2016; Horton et al., 2012; Lee et al., 2009; Pasila et al., 2017). Among new nurses, 40% are likely to commit a medication error, but this percentage has shown a decrease when new nurses experienced a nurse preceptor program (Lee et al., 2009). Ulrich et al. (2010) found that 65-75% of new graduate nurses did not meet the expectations for clinical judgement and were unable to translate theory into practice. A preceptor, however, can give new nurses the support, time, and guidance to facilitate their clinical thinking skills and their nursing practice (Watkins et al., 2016). New graduate nurses who have participated in a nurse residency program have higher levels of job satisfaction and decreased anxiety, due to their relationships with the preceptors who have facilitated their development of nursing

skills and transition into the nursing practice. In addition to improving nursing skills, preceptor programs also help build positive relationships among nurses and help transition new nurses to clinical practice (Kang et al., 2015).

Preceptee's Experience during Preceptorships

Knowledgeable preceptors understand the principles and skills necessary to the role, which can improve the preceptees' experiences and development. Nurse residencies that involve preceptors can improve nurse retention (Bratt, 2009). Bratt (2009) conducted a study of in rural areas of Wisconsin and found that after nurse residencies were implemented, new graduate nurse retention rates were 75-100%, which was significantly better than the 50% turnover rate before the residency was implemented. In addition, Hu et al. (2015) found that new graduate nurses who had educated preceptors had lower stress levels, better work experiences, and lower turnover intention than those who had a traditional preceptor model. In addition, new graduate nurses who had preceptors that completed 10-minute preceptor model reported statistically significantly higher satisfaction with their preceptors than the control group, who had preceptors with no education (Hu et al., 2015). Tiew et al. (2017) found similar results that new graduate nurses had developed competence, had support, and integrated into the workplace culture after they had been through the mentorship/preceptor program. To supplement this, Marks-Maran et al., (2013) also found conducted a study to evaluate a preceptor program for new nurses in London. The researchers wanted to determine the impact, value, and sustainability of the program from the preceptees' perspectives. The researchers noted all of the preceptors had a preceptor education course before they oriented the new graduate

nurses. The researchers found that preceptees valued preceptors and preceptors helped decrease the amount of stress preceptees felt, while also improving the preceptees' communication skills, clinical skills, and personal and professional development (Marks-Maran et al., 2013). The preceptees also felt that the program was beneficial and stated they were interested to become preceptors in the future. The program was found to be positive, of value, and sustainable in the hospital, which it was implemented. The study pointed out the importance of preceptors to preceptees' development of skills, knowledge, and clinical competence. There were many limitations of the study including a low sample size, low response rate, and limited setting (Marks-Maran et al., 2013). The setting consisted of only one hospital, and the researchers did not mention what unit the preceptees were working in or the education of the preceptees such as bachelor or associate degree prepared (Marks-Maran et al., 2013). Omer et al., (2016) conducted a study to describe the expectations of the preceptors 'role and responsibilities as believed by the preceptors and their orientees. Both preceptors and orientees rates the role of protector as highest and evaluator as lowest, with educator as second, and facilitator as third. (Omer et al., 2016).

Ong et al. (2021) conducted a descriptive qualitative study to determine what primary health nurses' experiences were in precepting. They utilized purposeful sampling and interviewed 14 nurse preceptors in Singapore. Nine of the subjects had a bachelor's degree, whereas the rest had either a diploma or post-basic certificate. The researchers used thematic analysis and found that nurse preceptors felt that lacked knowledge for their role, there were barriers to building therapeutic relationships with their orientee, and

there were organizational barriers they had to overcome. The researchers found that the subjects felt that personal attitudes, personality differences, and preceptee disinterest all affected their relationships. They also found that the preceptors felt they lacked knowledge to preceptor nurses. In addition, the preceptors felt that the organization did not recognize them and their contributions while they precepted. In addition, the subjects also voiced concerns that there were not enough opportunities to precept and practice their precepting skills. The researchers only interviewed nurses from primary care facilities, so these results cannot be generalized to the emergency department. In addition, the researchers did not ask the subjects if they had any preceptor preparation or education. This would have been beneficial to know since it could influence their answers and experiences with precepting.

Watkins et al., (2016) conducted a study to examine the relationship between newly graduate registered nurses' perceived preceptor role effectiveness. It was found that preceptors who were perceived as effective were associated with increased autonomy and empowerment in the new nurses. Watkins et al., (2016) showed that preceptees are better adapted to their new nursing role if they believed their preceptors were prepared and effective in their precepting role. By having a better orientation to their role, it empowers new nurses and increases their longevity within the nursing field. This study is not without its limitations however, because it had a low response rate of 19% and only looked at BSN prepared new graduates, which leaves out a large fraction of the rural nursing force which are associate degree prepared nurses (Watkins et al., 2016).

Preceptees come from different backgrounds and educations. Because of this it is important to understand what these nurses believe is essential for them to learn their role. To understand what preceptees' believe is essential in preceptors a study, by Shinners and Franqueiro (2015), was conducted to examine the characteristics of effective preceptors and their ranking based on students ranking of characteristics and to assess the influence of a preceptor's specialty, credential, and program the student is involved in and how they influence preceptor behavior. The sample consisted of 351 students from randomly selected programs, who completed an online survey to evaluate their preceptor (Shinners & Franqueiro, 2015). The preceptor scale used had four different categories including knowledge, interpersonal skills, personality characteristics, and preceptor teaching ability. The researchers used a preceptor behavior scale to determine which behaviors the students thought where associated with increased preceptor effectiveness (Shinners & Franqueiro, 2015). The preceptor scale was made of 40 preceptor behaviors with four different categories, which included competence, inter-professional relationships, personality characteristics, and teaching ability (Shinners & Franqueiro, 2015). The researchers found that the student ranked competence as the most important characteristics of a preceptor (Shinners & Franqueiro, 2015). They also found that the biggest difference between the effective and ineffective preceptor is teaching ability (Shinners & Franqueiro, 2015). This study is important for social change because it shows that preceptors need to be competent in multiple areas to be successful in their preceptor role and improve the orientation of students to their new role.

It has also been shown that specific ED orientation with preceptors improves the confidence and retention of new graduate nurses (Loiseau et al., 2003). In addition, a literature review by Piccinini et al. (2018) found that educated preceptors help increase new nurse retention, which in turn can save hospitals staff turnover costs and help reduce economic restraints caused by staff turnover. Furthermore, preceptors help increase new graduate nurses' skills and competency as a clinical nurse (Nielson, 2017). This is important because the goal of a preceptor is to orientate a new nurse, so the nurse can be successful when practicing on their own; by showing that preceptors help increase competence, it shows the importance of the need for preceptors and the importance of providing the preceptors with the preparation and support.

Preceptors' Thoughts on Roles

Beside orientee's views, it is important to know how preceptors view their role, education, and support. Henderson et al. (2006) found that preceptors, who worked in medical, surgical and oncological units in a large hospital, were satisfied with their educational support and their role as a preceptor after a 2-day preceptor program. However, they found that their subjects were no satisfied with the managerial support. Coates and Gormley (1997) conducted an exploratory case study to examine the views preceptors had on preceptorship after an educational course in the United Kingdom. From the preceptors, the researchers found that preceptors believed that being a role model was the most important aspect of their role, while teaching was second (Coates & Gormley, 1997). They also found that preceptors believed their knowledge and experiences were the best features to help students learn. In another study Rodrigues and Witt (2013) found

that preceptors believed that being competent in education, professional values, basic public health science, management, health care, teamwork, communication, community orientation, and professional development were necessary before one became a preceptor. They also thought that a knowledge of pedagogical skills and educational principles were necessary before being a preceptor (Rodrigues& Witt, 2013).

In 2010, Paton conducted a qualitative research study to assess the types of knowledge preceptors use to precept nursing students in clinicals. This study was conducted in two phases. Phase one involved a descriptive survey which was send to the 770 preceptors in Canada, with 354 returning the survey (Paton, 2010). The second phase involved focus groups and individual interviews. From the interpretive analysis, the researcher found that preceptors connect with the students, create a culture of respect, acknowledge the realities, and reserve competent, safe care (Paton, 2010). Recently, Macy et al. (2021) conducted a study in a 15 bed ICU in Australia, which examined the nurse preceptors' perceptions of their role. The researchers found that researchers were committed to their role and that the preceptors' perceptions of support and benefits were related to their commitment to their role. However, there is decreased generalizability of this study because it was only conducted in one small ICU. These finding confirm other study's findings that support from organizations are important for preceptors.

Experience of Preceptors

By understanding how the preceptor feels and what they believe they need to be successful in their role, the preceptor relationship can be improved. Fox et al. (2006) found that preceptors had positive responses about their role; however, more than half of

them stated they had difficulties fulfilling the role of the preceptor at both periods. Omansky (2010) conducted a review of the literature and specifically focused on the experiences of preceptors. From the review, the researcher found that the preceptors were unhappy due to the haziness of the role because a preceptor was not well defined and that preceptors believed there was role conflict and role overload. The preceptors felt that there was no recognition for the extra work they were doing and that they thought they needed a smaller patient assignment due to the extra work precepting brought with it (Omansky, 2010). Valizadeh et al. (2016) also looked at the lived experiences of nurse preceptors who worked with new nurses and found that preceptors thought that preceptorships are challenging and stressful, there was lack of support, and lack of appreciation for their work. Raines (2012) found that preceptors wanted their managers and the students' faculty to recognize the time, effort involved in precepting the student nurses, and the preceptors' view on the overall experience depended on the type of student they precepted. The preceptors believed the qualities of the student influenced their experiences with students who were more prepared tend to be satisfying to precept, while those who were unprepared were challenging to teach (Raines, 2012).

Panzaveccchia and Pearce (2014) conducted a qualitative descriptive study to determine what support was given to preceptors and discover the qualities the preceptors needed to be successful in their educator role. Overall, the researchers found that preceptors had no preparation or education for their new role, and felt ill prepared for their role as an educator. In addition, Chang et al. (2015) examined preceptors' perception of preceptor educational courses and obtained information about their

experiences as working as nurse preceptors. The researchers found that inadequate preparation was received before nurses were appointed as nurse preceptors. The themes from the focus groups were found were the preceptors felt they had inadequate preparation before being a nurse preceptor, courses were more theoretical rather than practical, and that preceptors faced stress from multiple sources (Chang et al., 2015).

Kalishchuk et al. (2013) conducted a study to examine the preceptors' views on benefits, rewards, and challenges in their preceptor role, which also corroborated the study by Omasky (2010). The researchers found that the preceptors became a preceptor to see how students grew as practitioners and they felt rewarded when something clicked in the student's mind. The challenges of being a preceptor were their workload and lack of preparation for the preceptor role. The researchers also found that most preceptors wanted a reward of recognition for their role and not a material object. The researchers also found that the greater the preceptors perceived the benefits of precepting and the more support preceptors have, the more committed to the role they were.

Sroczynski et al. (2012) sent out a 35-multiple choice survey to collect qualitative and quantitative data about the preceptor experience, education, organizational factors that supported precepting, and barriers to precepting. They sampled medical-surgical nurses who had precepted within the past two years from the eastern US. The researchers found that preceptors had no formal preparation for their precepting role and that the preparation they did get was not tailored to precepting (Sroczynski et al., 2012). They also found that the preceptors desired more education, reduced patient assignments, and increased organizational support for the preceptor role.

Effects of Preceptor Class on Preceptors

It has been found that 49% of preceptors felt they were not prepared for the preceptor role (Yonge et al., 2008). Preceptors must be given proper education for the role in order to be effective within the role (Quek & Shorey, 2018). It is important to understand what preceptors needs to be successful in their role.

Westra and Graziano (1992) conducted a study which looked at the needs of preceptors before and 1 month after they precepted in a large 464-bed hospital in Boson, Massachusetts. They found that there were statistically significant differences in the evaluating novice performance, with an increase in understanding after the educational program. The only other statistically significant finding was that preceptors needed more clinical experience before becoming preceptors. Horton et al., (2012) conducted a study to see if an 8-hour nurse preceptor course prepared the preceptors to take on their educator role and made them more effective in that role of educating new nurses. The researchers found that preceptors felt that they were more effective in their role as a preceptor after attending the preceptor academy course (Horton et al., 2012). The researchers also found that the attendees believed the most important content in the course was personality types and how to handle conflict. However, the results of this study were limited due to the low response rate of 25% (Horton et al., 2012).

In addition, Kang et al. (2015) found that after a preceptor class, preceptors' stress levels decreased throughout the year they were being monitor, and they had better relationships with their orientees as the time of precepting increased. However, the data was not obtained before the educational class was implemented, so it is unsure if the

results are from the educational program or something else. Also, the study was conducted at one hospital and had a low sample size decreasing its generalizability. Bush and Lowery (2016) looked at the effect of postgraduate education on job satisfaction of nurse practitioners and found that the nurse practitioners who had formal postgraduate education had statistically significant differences in job satisfaction between the groups, with the group who had postgraduate education having higher mean job satisfaction scores. Of late, Dorgham and Obied (2021) suggests that even academic clinical nurse educators need preceptor programs and education to prepare them to be preceptors and improve their self-efficacy in the role.

Teaching Characteristics

Smith et al. (2011) conducted a study whose purpose was to describe the characteristics of teaching which students and preceptors believed were important for preceptors to have. Smith et al. (2011) asked the subjects about 22 clinical characteristics and measured the importance of each characteristic and the congruence between the preceptor and the students. It found that all of the characteristics were perceived to be important by both the preceptors and the students. They also found that students and preceptors significantly differed in their rankings of the characteristics. The highest rating characteristics were stimulating student involvement and encourages independence (Smith et al., 2011). With the lowest ranking characteristics being the use of care plan and scholarly knowledge. Preceptor education was ranked 13th by the students and last by the preceptors (Smith et al., 2011).

Prior studies have not looked at the congruence between what the preceptors and preceptees believed was important characteristics for preceptors to have. Smith et al. (2011) found that preceptors and preceptees differed on what characteristics they believed preceptors should have. One of the most significant differences is the importance of education. Preceptors did not believe it was important, whereas, students ranked it in the middle for characteristics.

However, Smith et al.'s study had limitations. The first limitation was the low sample size and poor response rate. Furthermore, the researchers conducted the study in one large Midwestern hospital and only looked at nurse anesthesia students (Smith et al., 2011). Because the study was conducted in one hospital and one area of nursing, the results cannot be generalized, especially to the ED and in rural hospitals. This study highlighted the importance of understanding what both preceptees and preceptors believe is needed for the relationship to be successful (Smith et al., 2011).On the other hand, Knisely et al., (2015) compared nursing students and preceptors' perceptions of teaching characteristics in preceptors and evaluate each of the groups' evaluation of the teaching characteristics (Knisely et al., 2015). The sample consisted of 278 preceptors and 78 students. The researchers used a web-based questionnaire that listed 21 teaching characteristics, which the students and preceptors rated, based on their importance and then they identified the most and least important characteristics (Knisely et al., 2015). After the analysis, the researchers found that both the students and preceptors rated clinical competence as the most important characteristic; however, both groups disagreed

with the characteristic of remaining calm under stressful situations and the degree of flexibility (Knisely et al., 2015).

Preceptor Knowledge

Proper education is essential when someone is transitioning to a new role. Preceptors have skills and knowledge which may not have been previously taught, especially if they did not obtain a bachelor's degree. Preceptor education has been shown to increase job satisfaction and also improve the feelings of preparedness of the preceptor in large hospitals (Speers et al., 2004). Mitchell et al., (2018) evaluated preceptor programs for specialty community-based child and family health nurses in Australia. The nurses in the study had to be midwifes, however their education was not uniform and not all held advanced degrees (Mitchell et al., 2018). A preceptor program was implemented which contained information on critical thinking, problem solving, communication skills, role of the preceptor, teaching and learning theories, strategies for adult learning, and a discussion of issues that may arise (Mitchell et al., 2018). Data were collected before, immediately after, and 12 months after the educational session, and from the data is it was found the preceptors had a better understanding of their role, were more certain of the standards of performance, were more confident in their role, and there an increase in positive preceptor experiences following the educational sessions (Mitchell et al., 2018).

However, Mitchell et al. (2018) utilized a survey that was not validated through statistical methods, which brings their results into question, and there was a low sample size and response rate, leading to a decrease in the generalization of the findings (Mitchell et al., 2018). In the country of Jordan, an experimental study with, a sample of

68 RNs from government, private, and teaching hospitals, examined the effects of preceptor education on preceptor knowledge (Al-Hussami et al., 2011). The subjects were randomly assigned into either the control group or the experimental group, which attended a preceptor education program (Al-Hussami et al., 2011). A pre and post-tests was used to gather data and found that the control group had no changes in the pre and post-test scores (Al-Hussami et al., 2011). However, the experimental group had a statistically significant increase in their scores after they received their preceptor education compared to their pre-test scores (Al-Hussami et al., 2011). It was also found that the differences between the experimental and control groups post-test scores were statistically significant, showing that preceptor education improves the preceptor's knowledge (Al-Hussami et al., 2011). Finally, an ANCOVA was completed to determine if the differences between the control and experimental groups was caused by the educational intervention or by the differing characteristics of the group (such as age, sex, previous education, experience). The ANCOVA showed that there was no significant relationship between any of the demographic variables and the post-test scores (Al-Hussami et al., 2011). From these tests, the researchers concluded that the differences in results they obtained were from the implementation of the preceptor education program. While this study shows the effect of preceptor education in Jordan, the subjects all had either a bachelor's or master's degree in nursing which decreases its generalizability to the rural population in the US, which has a larger percentage of associate degree prepared nurses.

Sanford and Tipton (2016) conducted a retrospective study to identify if a preceptor class changed preceptor practices and behaviors. The researchers found that the preceptor class improved the preceptors' skills and teaching abilities, while also helping them achieve their goals as a preceptor (Sanford & Tipton, 2016). The participants also stated that the class improved their listening skills, helped them apply new content, and supported them as a preceptor (Sanford & Tipton, 2016). However, they also had a small study of only 18 subjects and looked at CNAs, LPNs, and RNs (Sanford & Tipton, 2016). Lin et al., (2013) conducted a study to evaluate the effectiveness of an educational program on preceptors' teaching feedback skills and found that the experimental group, which received the education, had better feedback skills than the control group in the post-test. They also found there was a significant difference between the pretest and posttest scores of the experimental group and no significant difference between the pretest and post-test scores of the control group (Lin et al. 2013). These results show that the education program in this improved preceptors' teaching feedback skills.

Senyk and Staffileno (2017) developed an online preceptor education program, gave it to 66 new preceptors, and measured the preceptors' satisfaction with the program and knowledge goals. Preceptors were able to log onto an online educational page to access the content, view additional resources, and provide support to other preceptors. By doing this, is helped decrease the costs of preceptor education within the hospitals and standardized it because the exact same content was always delivered (Senyk & Staffileno, 2017). From their study, it was found that there was decreased preceptor turnover, increased preceptor satisfaction, increased preceptor knowledge, and a cost reduction due

to the standardization of education (Senyk & Staffileno, 2017). However, there was a low turnout, so the results cannot be generalized. In addition, Wu et al., (2018) performed a systematic review of the literature finding articles published between 2000-2016 from the CINAHL, Medline, OVID, PubMed, Science Direct, Scopus, and Web of Science databases. The researchers reviewed nine articles, from the time period, and found that online educational programs which have been established include the roles and responsibilities of a preceptor, adult learning theory, clinical teaching pedagogies, clinical assessment strategies, feedback skills, handling challenging situations, and leadership practices (Wu et al., 2018).The researchers also found that online delivery of education provide flexible learning and enable interactive learning among different individuals. The researchers also found that over half of the studies found that online education had a positive outcome on preceptors' knowledge and skills (Wu et al., 2018). In addition, the preceptors reported satisfaction with the online learning programs in half of the studies (Wu et al., 2018). However, the studies reviewed, had small sample sizes and did not report the cost of the online programs

Bradley et al. (2007) combined online and face-to-face instructions for preceptors and made a hybrid class for preceptors. The researchers surveyed 136 nurses who were given this new program and found that the subjects believed the web-based content was beneficial and prepared them for their class, while also providing them with the flexibility (Bradley et al., 2007). However, they did not like when it was repeated in the face-to-face class. Their study also found that the education improved preceptors' knowledge related to their role and for feedback strategies (Bradley et al., 2007). Riley-Doucet (2008)

conducted a study to examine if a self-directed learning module for preceptor education had an impact on preceptor knowledge and satisfaction. The researchers obtained a sample of 119 preceptors from various teaching hospitals located in the Midwest of the United States (Riley-Doucet, 2008). From the analysis, the researchers found that the subjects were satisfied with the education and the mean scores for knowledge on the posttest was 90.13% (Riley-Doucet, 2008). However, this study did not do a pre-test so unsure if the preceptors knowledge improved or if they had this knowledge beforehand.

Kennedy (2019) took research a step further, conducted a descriptive study of 88 nurse preceptors, and examined their perceptions of the preceptor role and effectiveness of the nurse preceptor educational program by comparing nurses who had preceptor education to those who had no preceptor education. Kennedy (2019) found that preceptors who had education reported their ability to practice evidence-based standards were statistically significantly better than those who had no education. It was also found that preceptors who had education had higher perceptions of benefits and rewards, preceptor support, and commitment to the role. Those with preceptor education had higher scores on teaching strategies than those who did not have preceptor education. (Kennedy, 2019). Also, the researcher found that those who had preceptor education had increased preceptor satisfaction with both of the groups it was found that they believed there was lack of organizational support in their preparation and workload, lack of ongoing education, and lack of availability of support. Both of the groups felt ill prepared for their preceptor role (Kennedy, 2019). Kennedy (2019) concluded that the preceptors are committed to their role as a preceptor; however, they need support and more

education to withstand it. Even though this was a good study, its limitation was that Kennedy (2019) used a convenience sampling method and only sampled Academy of Medical-Surgical Nurse members, so the results cannot be generalized to other populations.

Smedley et al. (2010) assessed whether nurse preceptors who had taken a preceptor class increased their knowledge of the educator role, increased knowledge of preceptor skills, increased their self-efficacy, and if it improved their attitude toward the student nurses they oversaw. The study also looked at the relationships between the registered nurse preceptors' demographic characteristics and the educational outcomes of the preceptor program in Australia (Smedley et al., 2010). The study had a small sample size of 63 nurses. An independent *t*-test and one-way ANOVA with a post hoc analysis were completed and showed there were no significant differences in scores based on demographic variables of the respondents (Smedley et al., 2010). However, 75% of the subject believed their knowledge of teaching and learning had increased because of the preceptor program (Smedley et al., 2010). It was also shown that an increase in knowledge and teaching, and the development of preceptor skills were related to the nurses' perception of having a better performance as a nurse preceptor (Smedley et al., 2010). From the regression analysis, it showed that the preceptor skills were related to an increase in preceptor self-efficacy and there was an increase in preceptor self-efficacy and a change in attitude toward student nurses after the class (Smedley et al., 2010). In addition, it was found that generic preceptor skills were related to a positive increase in preceptor self-efficacy and a positive relationship between preceptor self-efficacy and a

change in attitude toward student nurses (Smedley et al., 2010). In contrast, Parker et al., (2012) found that there was no significant difference in knowledge scores after preceptors took a preceptor education course. However, this study had a low sample size and poor response rate of 14 out of 112 preceptors, which decreases the usefulness and vigor of the study's results.

A majority of the studies discussed have shown that preceptor education increases preceptor knowledge. However, most of these studies were completed in larger populations and nursing fields that have different characteristics and challenges than rural EDs.

Summary

Preceptors have an immense responsibility preparing new nurses in their career. Proper orientation with preceptors has been shown to improve patient outcomes, decrease new graduate nurse retention rate, and improve critical thinking skills, decrease stress levels, and increase job satisfaction (Almada et al., 2004; Horton et al., 2012; Pasila et al., 2017). Because preceptors have a vital role in the preparation and retention of new nurses during the nursing shortage, it is imperative they receive the necessary support and education to perform their role. However, preceptors have experienced inadequate education before beginning their new position as preceptor (Sroczynski et al., 2012). Adequate education is imperative because studies have found that preceptors who take an educational course have improved job satisfaction, feedback skills, communication skills, use more evidence-based practices, and improve their overall skills (Kennedy, 2019;Lin et al., 2013; Sanford & Tipton, 2016). Besides knowledge, the ability to deal with

prospective situations one has not encountered is an important characteristic for both preceptors and emergency nurses to have. Self-efficacy is important because preceptors need to be able to deal with challenging situations that may arise during their time in the role. Online preceptor education has been shown to improve self-efficacy as well as knowledge (Zahner et al., 2009).

Even though the previous literature has shown the importance of preceptor education, standardized preceptor education is lacking, especially in rural areas. In addition, the previous studies were conducted in larger urban hospitals, which decreases their generalizability to rural areas. This is important because rural areas tend to have a harder time recruiting nurses due to limited resources, while also having more associate degree prepared nurses who do not have the previous knowledge to perform preceptor duties (Health Resources and Services Administration, 2013). These challenges, which face rural hospitals, especially high acuity areas, such as the ED, make preceptor education a vital component to the orientation process. Chapter 3 will address the research design, rationale, methodology, and threats to validity of this study.

Chapter 3: Research Method

Introduction

The purpose of this study was to determine if an online nurse preceptor informational PowerPoint presentation a) affects the knowledge and self-efficacy levels of ED nurse preceptors who work in a rural area. Chapter 3 includes the research design and rationale, research variables, methodology, population, sampling procedures, instrumentation, data collection, data analysis plan, and threats to validity.

Research Design and Rationale

A quantitative one-group pretest-posttest quasi-experimental research design was conducted in a rural ED in the Northeastern US to answer the following research questions:

RQ1: Are there significant differences in terms of rural ED nurse preceptors' knowledge posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest?

$H_0 1$: There are no statistically significant differences in terms of rural ED nurse preceptors' knowledge posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest.

$H_a 1$: There are statistically significant differences in terms of rural ED nurse preceptors' knowledge posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest.

RQ2: Are there significant differences in terms of rural ED nurse preceptors' self-efficacy posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest?

$H_0$2: There are no statistically significant differences in terms of rural ED nurse preceptors' self-efficacy posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest.

H_a2: There are statistically significant differences in terms of rural ED nurse preceptors' self-efficacy posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest.

A quasi-experimental design is appropriate because there was a nonprobability sampling of participants. Quasi-experimental research designs are used to estimate the causal impact of interventions on a target population that has not been randomly assigned (Frankfort-Nachmias & Leon-Guerrero, 2018). Quasi-experimental designs tend to have internal validity problems involving instrumentation, testing, and random sampling; however, for this study, it was the design of choice due to lack of random assignment and selection of subjects. For those reasons, a quasi-experimental one group pretest posttest design was implemented to measure differences between self-efficacy and knowledge of rural ED nurse preceptors before and after they completed the preceptor informational PowerPoint presentation. Nurse preceptors who have improved self-efficacy and are educated have the potential to improve nursing practice and patient outcomes. However, changes in nursing practice and patient outcomes are beyond the scope of this study.

Variables

The independent variable was viewing of the preceptor informational PowerPoint presentation. The preceptor education program was developed and validated by Garner and Kaldawi and tailored to the ED by including ENA triage materials and Sweet's (2018) emergency nursing curriculum. This online informational PowerPoint presentation including information on the roles of preceptors, triage education, teaching styles, learning styles, critical thinking in emergency situations, and feedback and evaluation.

The dependent variables were self-efficacy and knowledge. Self-efficacy was measured using Parson's preceptor self-efficacy survey. Preceptor knowledge was measured using the KTL.

Research Design Choice

A quantitative one-group pretest- posttest quasi-experimental research design was chosen for this study because there was no control group and subjects were not randomly chosen or assigned, making this type of research design the most appropriate. The pretest-posttest design was used to determine effects the informational PowerPoint presentation, provided by Facebook administrators, had on Northeastern rural ED nurse preceptors. This design was most appropriate because it involved evaluating a single group and the dependent variable before and after the treatment was implemented. This was most appropriate because the pretest analysis provides researchers a means to compare scores and to assess effects of the dependent variable and evaluate if the implementation of preceptor informational PowerPoint presentation in rural EDs influences knowledge and self-efficacy of rural preceptors. While not every ED nurse is a

preceptor, to use nurses who have never been preceptors in the study would be improper. Administering a pre and posttest before and after the informational PowerPoint presentation will provide data to evaluate if subjects' survey scores changed due to their education. Preceptors are essential in terms of education of nurses in EDs; however, there is no standard preceptor education, and some facilities do not offer it. Therefore, this study may support the need for standard preceptor education, while also improving preceptor skills of ED nurses and making them more competent in clinical settings. By conducting this study, this could lead to future research on the longitudinal effects of preceptor education involving retention rates, patient outcomes, and nurse satisfaction. It could also lead to more research on specific preceptor education topics or preceptor needs assessments in rural areas.

A pre/posttest education program was used because of characteristics and challenges that are present in rural EDs. Rural areas have a higher composite of associate degree-prepared nurses (HRSA, 2013). These nurses may not have the knowledge base required to precept new nurses, which increases the risk that orientation is ineffective or subpar. Due to these factors, a pre/posttest study with a nurse preceptor educational program was deemed appropriate for this study. Recommendations for clinical practice change based on analysis of data were provided.

Design-Related Constraints

There are multiple design-related constraints with pretest-posttest quasi-experimental designs. One constraint involved the possibility of confounding variables and social environments due to subject maturation between tests. The posttest was

administered 4 weeks after the initial test. Because of the time between tests, other factors could have influenced results, such as preceptors' experiences, communication with fellow nurses, and other educational opportunities. Another constraint involved testing familiarity. Because the same tests are used, there needs to be a least a 2-week period between the pre and posttest to help decrease familiarity with the questions (. Another constraint involved lack of randomization. Because there was no random selection, results may not be generalizable to other populations. Another constraint involved the availability of the preceptors. Schedule changes, vacations, job transfers, COVID quarantine, and termination of employment were all potential factors during the month between the pretest and posttest. However, because the education is online and self-paced, this constraint is reduced.

Methodology

Population

The target population was rural ED nurses in the Northeast US. Target exact population characteristics are unknown due to lack of available information on nurse demographics and characteristics, which are available only to nurse managers in those EDs.

Sample Size

A power analysis was conducted to determine the sample size for this study. A paired two-tailed *t*-test was used via G*Power software. The nursing field uses a medium effects size for interventions; because of this, a medium effect size was chosen for this study. The medium effects size for the *t*-test is 0.5, while the alpha for the study is 0.05.

The power selected is 0.80 for this study. Therefore, a power analysis of 0.80, medium effect size of 0.50, and alpha of 0.05 were put into G*Power software to determine a sample size of 32. This was the minimum sample size, as more participants were sampled in case of nonparticipation.

Sampling and Sampling Procedures

Convenience and snowball sampling were used in this study. A convenience sample of rural ED nurse preceptors who work in Northeastern US hospitals was obtained for this study. This sample was obtained through a Facebook group with Northeastern emergency nurses. Convenience sampling was used because subjects were readily available, and this type of sampling is useful to document if a phenomenon occurs within the specific sample. In addition, snowball sampling was used by telling participants they could forward this study link and information to others who meet the inclusion criteria and were interested in participating in the study. Although convenience sampling is one of the most common sampling strategies used in research due to readily available subjects, a major disadvantage of it is the risk of bias. In addition, because of lack of random selection, study results can only be generalized to the same population (Haber, 2018).

Procedures for Recruitment, Participation, and Data Collection: Primary Study

Recruitment was done via a Northeastern US emergency nursing Facebook group. All participants were registered ED nurses who worked in the northeastern US. Administrators of the Facebook group were sent a private message outlining the purpose of my research and asking if they would post information to the group. By having

administrators post the information to the group, I maintained anonymity. Administrators then posted the link to the survey and educational material to the Facebook group. All participants had at least 1 year of emergency nursing experience, currently worked in an ED, held an active RN license, and had precepted a nurse within the last year from when the study started.

Informed consent was obtained and included in the SurveyMonkey link which was posted by administrators of the Facebook group. All members of this Facebook group were inspected prior to being accepted to the private group. Administrators allow anyone who is part of the group to post, and permission was granted to post any research study and material related to it. This study complied with Facebook guidelines and the group's usage policies. Once informed consent was received, pretest data were obtained via a SurveyMonkey link. The only identifying data collected from participants was their email address, and then subjects were asked to choose a unique identification code when they filled out their survey. Thus, the identity of participants was unknown to me. Participants entered this number on their informed consent form, demographic data form, pretest, and posttest. After the pretest was completed, participants were given a link to the online education presentation. Four weeks after they have completed this, the SurveyMonkey link with the posttest was made available to participants' email addresses.

By having participants use a unique identification code, I deidentified data and matched pretest and posttest answers. Demographic data that were collected included subjects' highest education level, original nursing educational degree, years of experiences as a nurse, years of preceptor experience, whether they had any previous

preceptor education, and sex. After completing the demographic data form, the pretest was delivered by the administrators of the private ED Facebook group via a link on SurveyMonkey. After completing both the demographic survey and pretest, subjects then clicked on a link to the preceptor informational PowerPoint presentation which was previously developed by Garner and Kaldawi and tailored to ED preceptors and administered online. This was a self-paced informational presentation, so each subject was be able to go through it at a time which was convenient for as long as they wanted or repeat it as many times as they needed within a 1-week period. Four weeks after subjects completed the ED preceptor informational PowerPoint presentation, a posttest link was emailed through SurveyMonkey to participants. The survey generated a specific link for individuals to participate in this study.

Instrumentation and Operationalization of Constructs

Preceptor Self-Efficacy Questionnaire

Parsons developed the preceptor self-efficacy scale. This self-assessment was appropriate for this study because it measures preceptor's self-efficacy which is what this study investigated. There were a total of 21 questions on the Parson's self-efficacy scale which are scored on a Likert scale of one to four, with one meaning completely lacking confidence and four being very confident (see Appendix B). Permission was given by Parson to utilize the whole scale, however, the entirety of Parson's scale is unpublished in this appendix as requested by Parson. This questionnaire was completed immediately before and 4 weeks after the program was implemented. Permission to use the survey was

granted from the developer of the instrument via email correspondence (see Appendix A).

Reliability and Validity of Tool

Parson's stated the Cronbach's alpha was 0.93, which established the reliability and internal consistency of Preceptor Self-Efficacy Questionnaire. Parson designed the preceptor self-efficacy instrument based off the Community Advisor Self-Efficacy (CASE) questionnaire. Parson conducted an expert review and pilot testing to determine the Cronbach's alpha pf the new instrument. This instrument included behaviors associated with the preceptor role, learning strategies, and providing feedback and evaluation (Parson, 2007), then, 48 community/public health nurse preceptors who had received a preceptor education program were used for the sample. Validity of the instrument was obtained by undergoing the Delphi process. The Delphi process involves identifying issues and objectives, having a group of experts to consult, and developing questionnaires through different rounds to achieve consensus from experts.

Changes in KTL Surveys

Smedley et al. developed the KTL. This self-assessment was appropriate for this study because it measures preceptors' knowledge and understanding in the various components of a preceptor educational program. Five questions on the instrument were scored on a Likert scale of 1-4 (see Appendix D). The tool was completed immediately before the preceptor education and four weeks after the program was implemented. Permission was granted from the developer of the instrument via email correspondence (Appendix C).

Reliability and Validity of Tool

Smedley et al. commented on the internal reliability of the KTL tool of 0.91, standard deviation of 0.5, and a mean of 3.11 (2010). A Cronbach's alpha of 0.91 established the reliability and internal consistency of the test. This sample for this tool were 63 nurse preceptors who received a preceptor education program. The validity of the instrument was obtained through the Delphi process by consulting with nursing academic and professional nursing clinicians to achieve the validity.

Preceptor Informational PowerPoint Presentation

The preceptor informational PowerPoint presentation was initially developed by Garner and Kaldawi and then tailored for ED preceptors and administered online (see Appendix G). Consent was given to use the program from the developers. The educational program is located in Appendix C. In module 1 of the program the definition and role of the nurse preceptor are presented. This included why precepting is essential and characteristics of effective preceptors, as well as common barriers to precepting. Module 2 presented communication skills and conflict resolutions skills. It also included a conflict video for the subject to watch. Module 3 presented learning theories and the principles of learning and teaching. In addition, the three domains of learning that support teaching were presented as well as learning styles, and Knowles's adult learning theory. This module also included a link to a learning style quiz so the preceptor could understand his/her own learning style. Module 4 included effective feedback and evaluation. Module 5 included tips and information on how to precept nurses to triage in

the ED. Throughout the online presentation there were areas for reflection on their practice and previous experiences.

Data Analysis Plan

Data Cleaning and Screening Procedures

The raw data obtained from SurveyMonkey was uploaded straight into the SPSS 25 software. Data was evaluated for its completeness with no missing data from the participants.

Statistical Tests

This research study was directed by the following research questions:

RQ1: Are there significant differences in terms of rural ED nurse preceptors' knowledge posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest?

RQ2: Are there significant differences in terms of rural ED nurse preceptors' self-efficacy posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest?

Descriptive statistics were conducted for all data collected in order to provide a summary and features of the data (Frankfort-Nachmias & Leon-Guerrero, 2018). Descriptive statistics, including mean and standard deviation, was used for continuous variables (example years of experience), and frequency and percentage for categorical variables (example preceptor's sex) (Frankfort-Nachmias & Leon-Guerrero, 2018). Data for this information was obtained from the surveys. The link to the surveys was posted to a Northeastern nursing Facebook group. The demographic data and other survey

variables were used for analysis and comparison purposes. The demographic information which was collected was the highest education level obtained, original nursing degree, years of experiences as a nurse, years of preceptor experience, if they had any previous preceptor education, and sex (Appendix E). Statistically significant findings were set at $p<0.05$.

In addition, a paired *t*-test used to compare the means of the sample and their self-efficacy and knowledge before and after they complete the preceptor informational PowerPoint. It is assumed there would be an improvement in knowledge and self-efficacy, but this may not be the case. This will provide feedback on whether the goals of the education were achieved. This was appropriate for my proposed topic and method because I wanted to establish if there were differences between the variables, by comparing the subjects' surveys before and after the informational PowerPoint (Frankfort-Nachmias & Leon-Guerrero, 2018).

Threats to Validity

Threats to External Validity

A threat to external validity for this study could have been selection bias due to the use of a convenience sampling (Gray et al., 2017). Using the convenience sampling could have decreased the generalizability of the results and the results may not have been representative of the population. To decrease this threat, rural nurses in the Northeastern US were surveyed. However, this still may not be representative of the population because an estimate of the number of rural ED nurses was not performed and the participants had to be part of Facebook to be involved. Another problem was volunteer

bias. Because the subjects who participated in the study were all volunteers, they could have characteristics that the general population does not (Gray et al., 2017).

Threats to Internal Validity

Because this was a quasi-experimental pre and post-test study, it had multiple threats to internal validity. The ongoing COVID 19 pandemic could cause a historical threat to internal validity. Because of the pandemic, and the fact that this is a pre-test, post-test study there could be surges, shut downs, or other factors that can affect the data. However, because the educational program was online and self-paced it can decrease these effects because it allowed the subjects to take the program when they are able to and hopefully not influenced by the ongoing pandemic.

Another threat to internal validity is maturation. Because this is a pre-test, post-test there were four weeks from the pre-test to the post-test. During this time, other factors could have influenced the subjects, such as school or continuing education classes. However, the four weeks is a short enough time to decrease the maturation risks. In addition, one cannot exclude this PowerPoint causing the subjects to learn more about precepting or going out and finding more information to help them in their practice. This would be a threat, but may also be beneficial for preceptors because they are learning added information, which is vital to their role. Selection-maturation is not a threat to internal validity in this study because there is only one group, so there is no maturation in-group difference (Gray et al., 2017).

The final threat to the internal validity is the testing. Because the same tests were used in the pre- and post-periods, this could have led to the subject becoming familiar

with the test causing them to change their answers (Gray et al., 2017). However, this is a pre-test post-test and because of this, the same instrument was used, so one could compare the answers. There is also four weeks in-between the two tests to help decrease this threat to internal validity and decrease the subjects' familiarity with the testing instruments.

Threats to Construct or Statistical Conclusion Validity

A possible threat to statistical conclusion validity was the low statistical power and sample size. However, a power analysis was completed to find an appropriate sample size for this study. In addition, the assumptions of the statistical tests were satisfied to also decrease these threats (Polit & Beck, 2012). The instruments were also reliable and valid which decreased these threats as well. Also, the testing was not cognitive, and there was no interpretation of the scoring by the researcher, so instrumentation was not a threat (Knapp, 2016).

Ethical Issues

Preceptors, who were members of a Northeastern US nursing Facebook group, participated in the study. IRB approval was received from Walden University, approval number 04-12-21-0611080. De-identified data was collected for both the pre-test and post-test. Additionally, the participants were not able to access the post-test until they completed the education module. The computer that was used to store data was my personal computer which is password protected and stayed in my home throughout the duration of the study. No one has access to my computer except for myself. The

Facebook group and participants were not named in this study. The data will be deleted after five years as required by the Walden IRB.

Other Ethical Issues

During the study, I was a member of the Facebook group included in this study. This could have led to a possible researcher bias. However, I am not an administrator or in leadership role in the Facebook group, which decreased the potential pressure to be involved in the study that could have taken place.

Summary

A quantitative one group pretest posttest quasi-experimental research design was be conducted to determine the impact an emergency nurse preceptor informational PowerPoint presentation on rural emergency nurses' self-efficacy and knowledge. A convenience sample of 32 nurse preceptors from the Northeastern US participated in this study. All participants met the inclusion criteria for the study. These nurses were recruited thru a Facebook group. Parsons' preceptor self-efficacy survey was used to measure preceptor self-efficacy, while knowledge was measured by the change in KTL (Smedley et al., 2010). A demographic data survey and pre-test was completed prior to the subjects taking the preceptor education program. A post-test was administered to the subjects 4 weeks later. The informational PowerPoint was developed by Garner and Kaldawi and tailored to the ED. This online informational PowerPoint presentation consisted of information regarding the role of the preceptor, triage education, teaching styles, learning styles, and feedback and evaluation. Permission from Walden University IRB was obtained before the study started. SurveyMonkey was used to distribute surveys

and the educational program. A paired *t*-test and descriptive statistics was used to analyze data. Threats to validity were minimized throughout the study and ethical issues were addressed. Chapter 4 includes results of this study.

Chapter 4: Results

Introduction

The purpose of this quantitative study was to determine if an online nurse preceptor informational PowerPoint presentation a) affects knowledge and self-efficacy levels of ED nurse preceptors who work in a rural area. In Chapter 4, I present a review of the data collection, descriptive and demographic characteristics of the sample, analysis of research questions and hypotheses, and a review of data analysis and summary of findings.

Data Collection

Rural emergency nurse preceptors who were members of a Northeastern ED nurse Facebook group participated in this study. The data collection began on April 24 and ended on June 18, 2021. Both the pretest and posttest were collected via SurveyMonkey. The posttest was administered 4 weeks after the pretest and informational PowerPoint presentation were completed. Both the online pre/post surveys were open for 1 week after the link was made available to participants. Participants chose unique identifiers for their pre and posttests enabling me to match their answers.

Data analysis was completed on my personal home computer which was password-protected. Data will be stored on this computer for 5 years, as required by the IRB, and will be permanently deleted after the period has passed. I previously conducted a paired two-tailed *t*-test with a medium effect of 0.5, an alpha of 0.05, and power of 0.80 using G*Power software and concluded that the sample size needed was 32 for this study. A total of 40 participants completed the pretest survey and informational PowerPoint

presentation; however, only 34 participants completed the post-survey. Of those 34 participants who completed the post-survey, only 33 unique identification codes matched, meaning that one was thrown out. Only 33 participants were included in the secondary data analysis. This yielded a response rate of 82.5%, which was adequate for a sample size of 32 participants.

The rural ED nurse preceptor informational PowerPoint presentation was delivered as planned to participants. It was presented online and made available to participants for a 1-week period. There were no concerns reported by participants during this study.

Comparison of Sample to Population

Nurse preceptors who participated in this study all worked in rural EDs located within the Northeastern US. The sample size was appropriate and met the required population needed to establish significance. The sample was 84.8% female, and 69.7% of participants' original nursing degrees were associate's degrees. The average number of total years of nursing experience was 11.7, whereas participants had an average of 7.3 years of preceptor experience.

In 2020, there were 193,409 nurses employed in EDs in the US (HRSA, 2020). According to the American Hospital Association (2020), there are 1,821 rural hospitals in the US. According to United States Census Bureau (2018), there are a total of 3,272,872 nurses actively working in the US, with about 9.6% of nurses being male. Rural ED nurses tend to be younger and are about 7.8% male (United States Census Bureau, 2018). However, there is no record of how many of these nurses work in rural EDs. Because of

this, it is hard to determine how proportional the sample in terms of the population of interest.

Results

Descriptive Statistics

The sample consisted of 33 rural ED nurse preceptors who worked in the Northeastern US and had 1 year of emergency nursing experience, currently worked in an ED, held an active RN license, and had precepted a nurse within the last year. The sample was mostly female (84.8%) and did not have previous preceptor education (69.7%). Of the participants, 69.7% had an associate's degree as their original nursing degree. In addition, 36.4% had an associate's degree as their highest nursing degree obtained, while 48.5% had a bachelor's degree in nursing, and 15.1% had a master's degree in nursing (see Table 1).

Table 1

Participant Demographics and Categorical Variables

Variable	Category	*N*	%
Highest Level of Nursing Education	Associate's	12	36.4
	Bachelor's	16	48.5
	Master's	5	15.1
Original Nursing Degree	Associate	23	69.7
	Bachelor's	10	30.3
Previous Preceptor Education	Yes	10	30.3
	No	23	69.7
Sex	Male	5	15.2
	Female	28	84.8

Participants' years of nursing experience ranged from 1 to 35 years (M = 11.7, SD = 10.13) with a mean of 11, whereas the number of years of nursing preceptor experience ranged from 1 to 25 years (M = 7.3, SD = 8.1) with a mean of 7 (see Table 2).

Table 2

Participant Demographics for Continuous Variables

Variable	Mean	Standard Deviation	Q25	Q50	Q75	Lower	Upper	Min.	Max.
Years of Nursing	11.7	10.13	4.5	7	23	8.5	14.9	1	35
Experience Years of Preceptor Experience	7.3	8.1	1	4	10	4.7	9.9	1	25

Statistical Analysis Findings by Research Question

RQ1

RQ1: Are there significant differences in terms of rural ED nurse preceptors' knowledge posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest?

H_01: There are no statistically significant differences in terms of rural ED nurse preceptors' knowledge posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest.

H_a1: There are statistically significant differences in terms of rural ED nurse preceptors' knowledge posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest.

A Cronbach's alpha was completed to test internal consistency of the KTL with this study's population. From the analysis, it was found that the Cronbach's alpha was

0.81; this established reliability and internal consistency of the KTL for this study's population.

The four assumptions of a paired *t*-test are (a) the dependent variable is continuous, (b) the measurements are independent of one another (i.e. the same participant is measured on two separate occasions), (c) differences between dependent variables are normally distributed, and (d) there are no significant outliers between the two groups (Frankfort-Nachmias & Leon-Guerrero, 2018). Data were evaluated using SPSS 25 for normality outliers. There were no significant outliers between the two groups. The Shapiro-Wilk test was used to determine normality. This was used because of the small sample size ($N = 33$). According to the Shapiro-Wilk test, the data were not normally distributed ($p < .05$). A Shapiro-Wilk test showed a non-significant (W (33) =.940, $p = 0.069$) on the overall pre knowledge test, however a significant (W (33) =.832, $p < 0.01$) on the overall post knowledge test indicating the data were not normally distributed in the post knowledge test, so a Wilcoxon test was used to examine the overall knowledge change following the education program.

Table 3

Wilcoxon Tests Comparing Changes in Total Knowledge

Knowledge	*M*	*P*
Total Pre-Knowledge	3.40	0.001
Total Post Knowledge	3.68	

Due to violation of the normality assumption, a non-parametric Wilcoxon signed-rank test was used instead of the paired *t*-test because it is meant for nonnormal data and

also for ordinal data. The non-parametric Wilcoxon signed-rank test was used because it is equivalent to the paired *t*-test and is a paired difference test that is used when the samples' means are not normally distributed.

The Wilcoxon signed-rank test was used to compare the preceptor knowledge individual questions. Most of the knowledge statements had a $p < 0.05$, meaning that the results are statistically significant. The only statement that was not statistically significant was *I was able to learn through reflecting on my own nursing practice* ($p = 0.15$).

I then conducted a Wilcoxon Signed Rank test to determine if the total pre knowledge test was statistically significantly different from the total post after the informational PowerPoint was completed. The Wilcoxon Signed Rank test results indicated that the online preceptor training program statistically significantly improved nurse knowledge (Z -3.328, $p = 0.001$) after completing the informational PowerPoint (*M* 3.678 [33]) compared to pre (*M* 3.400[33])(Table 3). The ranks showed that 20 participant knowledge scores were higher after the presentation and 5 participant scores were lower, with 8 participant scores not changing from pre scores to post scores. Because the results of the change were significant, I rejected the null hypothesis that there was no difference and concluded that my alternative hypothesis is supported. There is a statistically significant difference in rural ED nurse preceptors' knowledge after they completed an online preceptor informational PowerPoint presentation.

RQ2

RQ2: Are there significant differences in terms of rural ED nurse preceptors' self-efficacy posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest?

$H_0$2: There are no statistically significant differences in terms of rural ED nurse preceptors' self-efficacy posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest.

H_a2: There are statistically significant differences in terms of rural ED nurse preceptors' self-efficacy posttest scores after they complete an online nurse preceptor informational PowerPoint presentation compared to the pretest.

A Cronbach's alpha was completed to test the internal consistency of the Preceptor Self-Efficacy Questionnaire with this study's population. From the analysis, it was found that the Cronbach's alpha was 0.95; this established reliability and internal consistency of the Preceptor Self-Efficacy Questionnaire for this study's population.

RQ2 was addressed first by determining if the self-efficacy data met the assumptions for the t test. To test for normality of distribution of the data, a Shapiro Wilk test was used. The Shapiro-Wilk test examining the pre and post self-efficacy scores for the participants showed a significant ($W(33) = .931$, $p < 0.05$) on the overall pre self-efficacy test and a significant ($W(33) = .810$, $p < 0.01$) on the overall post self-efficacy test indicating the data were not normally distributed, so a Wilcoxon signed rank test was used to examine the overall self-efficacy change following the education program.

The Wilcoxon signed-rank test was used to compare the preceptor self-efficacy individual question scores. Most of the knowledge statements had a $p < 0.05$, meaning that the results are statistically significant. The statements which were not statistically significant *were the preceptor can provide verbal feedback to preceptees about their performance* ($p = 0.4$), *can provide constructive feedback* ($p = 1$), *maintain effective communication with preceptees* ($p = 1$), *and the preceptor can deal effectively with unexpected events or unforeseen problems* ($p = 0.07$).

Table 4

Wilcoxon Tests Comparing Changes in Total Self-Efficacy (N = 33)

Self-Efficacy	*M*	*P*
Total Pre-Self-Efficacy	3.45	0.003
Total Post Self-Efficacy	3.70	

I then conducted a Wilcoxon Signed Rank test to determine if the total pre-self-efficacy test was significantly different from the post after the informational PowerPoint was completed (Table 4). The Wilcoxon Signed Rank test results indicated that the online preceptor informational PowerPoint statistically significantly improved nurse self-efficacy (Z 2.73, $p = 0.003$) after completing the informational PowerPoint (*M* 3.70 [33]) compared to pre (*M* 3.45[33]), The ranks showed that 20 participant self-efficacy scores were higher after the presentation and 8 participant scores were lower, with 5 participant scores not changing from pre scores to post scores. Because the results of the change were significant, I rejected the null hypothesis that there was no difference and concluded

that my alternative hypothesis is supported. There is a statistically significant difference in rural ED nurse preceptors' self-efficacy after they completed an online preceptor informational PowerPoint presentation.

Satisfaction with Informational PowerPoint

Finally, the participants were asked to evaluate the informational PowerPoint based on a local ED continuing education evaluation. This evaluation had a 5-point Likert scale. This helped ascertain what the subjects believed was beneficial and what content was unbeneficial to them. From the data, it was found that 87.9% of the participants believed a change in their knowledge had taken place after reading the information PowerPoint. It was also found that most of the participants believed they could identify a minimum of three characteristics of effective preceptors (72.7% strongly agree), analyze one common theory, concept, or framework as it relates to the orientation process in the ED setting (69.7% strongly agree), develop and implement a learning plan with a preceptee based on their goals (63.6% strongly agree), identify proper precepting to triage techniques (69.7% strongly agree), the content was relevant to the objectives (81.8% strongly agree), the content was consistent with the stated program's goals and objectives (87.9% strongly agree), teaching methods were effective for the content (81.8% strongly agree), and audiovisual/handout materials were effective (72.7% strongly agree) (See Table 5). Interesting, no participants disagreed or strongly disagreed with the material they were presented showing that most of them believes it was beneficial or they neither disagreed nor agreed on some of the aspects of the informational PowerPoint.

Table 5

Satisfaction with PowerPoint

Variable	Category	*N*	%
A change in my knowledge has taken place as a result of participating in this course	No	4	12.1
	Yes	29	87.9
Identify a minimum of three common characteristics of effective preceptors	Strongly Agree	24	72.7
	Agree	7	21.2
	Neither Agree or Disagree	2	6.1
Analyze one common theory, concepts, or framework as it relates to the orientation process in the ED setting	Strongly Agree	23	69.7
	Agree	8	24.2
	Neither Agree or Disagree	2	6.1
Develop and implement a learning plan with a preceptee based on his or her needs and goals	Strongly Agree	21	63.6
	Agree	12	36.4
Identify proper precepting to triage techniques	Strongly Agree	23	69.7

Table 5 (Continued) *Satisfaction with PowerPoint*

Variable	Category	*N*	%
Identify proper precepting to triage techniques	Strongly Agree	23	69.7
	Agree	9	27.3
	Neither Agree or Disagree	1	3
The content was relevant to the objectives	Strongly Agree	27	81.8
	Agree	6	18.2
The content was consistent with the stated program objectives and goals	Strongly Agree	29	87.9
	Agree	4	12.1
Teaching methods were effective for the content	Strongly Agree	27	81.8
	Agree	5	15.2
	Neither Agree or Disagree	1	3
Audiovisual/handout materials were effective	Strongly Agree	24	72.7
	Agree	8	24.3
	Neither Agree or Disagree	1	3

Summary

Thirty-three rural ED nurse preceptors participated in this study to determine if an informational preceptor PowerPoint influenced their self-efficacy and knowledge. The sample was mostly female with an associate's degree as their original nursing degree, and did not have previous preceptor education (see Table 1). The sample had an average of 11

years of nursing experience and 7 years of nursing preceptor experience. Research Question 1 (change in knowledge) and Research Question 2 (change in self-efficacy) were significant ($p < 0.05$) and supported the rejection of the null hypothesis. It was found that most of the participants believed a change in their knowledge had taken place after reading the informational PowerPoint and most of them were satisfied with the PowerPoint presentation (see Table 5). In Chapter 5, findings are interpreted, including limitations, recommendations, implications, and analysis of self.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this study was to determine if an online nurse preceptor informational PowerPoint presentation affects knowledge and self-efficacy levels of ED nurse preceptors who work in rural areas. A quantitative one-group pretest-posttest quasi-experimental research design was conducted in rural EDs in the Northeastern US. A convenience sample of 33 rural ED nurse preceptors was obtained from a Northeastern US rural ED preceptor Facebook group. A deidentified Wilcoxon signed-rank test was used to compare subjects' knowledge and self-efficacy before and after education using SurveyMonkey. Results of this study were that there were statistically significant differences in terms of self-efficacy and knowledge of rural ED nurse preceptors after they completed the informational PowerPoint presentation.

Interpretation of Findings

Comparison of Findings to Existing Literature

As previously discussed in Chapter 2, preceptors are an integral part of the healthcare system who educate new and inexperienced nurses. These individuals provide quality orientation and improve graduate nursing retention and patient outcomes (Cotter & Dienemann, 2016; Watkins et al., 2016). Many rural areas lack resources for preceptor education, and these areas usually see a higher number of associate's degree-prepared nurses who may not have the knowledge or skills to successfully assume preceptor roles. Educating rural ED nurse preceptors improves their skills and teaching abilities, as well as their knowledge and self-efficacy (Sanford & Tipton, 2016; Senyk & Staffileno; 2017;

Smedley et al., 2010; Wu et al., 2018). However, current literature focuses on large urban hospitals, mostly in medical-surgical areas of nursing, whereas this study focused on rural hospitals and EDs, which has daily fluctuations in terms of patient acuity and quantity. This study addressed this gap.

The analysis found that 69.7% of participants' original nursing degrees were associate's degrees. Also, 69.7% of participants had no previous preceptor education. Wilcoxon signed-rank tests were conducted to examine whether there were differences in terms of rural ED nurse preceptors' knowledge and self-efficacy after they read an online preceptor educational PowerPoint presentation compared to their scores before they read the material. There was an overall statistically significant difference in terms of overall knowledge of rural ED nurse preceptors, leading to the rejection of the null hypothesis for RQ1. Results of this study support that preceptor education increases preceptor knowledge. The only statement that did not show a statistically significant increase was "learning through reflecting on my own nursing practice." All other knowledge statements had statistically significant increases in terms of posttest answers compared to pretest answers. There was also an overall statistically significant difference in terms of overall self-efficacy of rural ED nurse preceptors, leading to the rejection of the null hypothesis for RQ2. Four statements did not show a statistically significant increase: a) the preceptor can provide verbal feedback to preceptees about their performance, b) the preceptor can provide constructive feedback, c) the preceptor can maintain effective communication with preceptees, and d) the preceptor can deal effectively with unexpected events or unforeseen problems. There were 4 weeks between the pre and

posttest, which allowed preceptors to use information they learned from the PowerPoint presentation; however, it is unknown if preceptors precepted during this time. Because this is unknown if they precepted during the time this study took place, it is unknown if they were able to practice the skills they learned from the PowerPoint presentation.

The findings of this study support that preceptor education improves preceptor self-efficacy and knowledge. This confirms what other studies in larger, urban areas have found. The findings of this study support that educated preceptors are better able to carry out their roles as preceptors. It is important for these preceptors to be able to function in their new roles because of various characteristics they must have in order to provide a comprehensive orientation experience. Preceptors are also important in terms of orientees' experiences. Educated preceptors give new nurses the support, time, and guidance to facilitate their clinical thinking skills and nursing practice (Watkins et al., 2016).

These findings further support the need for standardized preceptor education, especially in critical care areas. The fact that over half of participants had no previous preceptor education is concerning, especially since preceptor education has been shown to improve both preceptor and preceptee experiences and patient outcomes. In addition, this study found that preceptors' self-efficacy and knowledge both improved after participants viewed the informational PowerPoint presentation. This study addressed a gap in research by specifically focusing on rural ED nurse preceptors. The findings of this study also support the need to properly support preceptors. Rural area facilities need to continue to reserve resources to help prepare preceptors for their roles. Giving preceptors

the resources they need, such as education, can improve not only their experiences but their preceptees' experiences as well (Hu et al., 2015).

Theoretical Findings

Benner's Skill Acquisition Theory

The theoretical framework for this study was Benner's skill acquisition theory. Benner's skill acquisition theory involves measuring healthcare professionals' progression, skills, and competence. Nurse preceptors need to have different skills and knowledge to be able to perform their roles. This study addressed this by addressing if there were differences in terms of preceptors' knowledge and self-efficacy before and after an informational PowerPoint presentation, which included knowledge specific to ED nurse preceptors based on ENA recommendations. From the study, it was found that there were statistically significant differences in terms of both preceptors' knowledge and self-efficacy after an informational PowerPoint presentation.

Self-Efficacy Theory

The second theoretical framework for this study was the self-efficacy theory. Self-efficacy is the belief one has that they can perform actions to manage future situations and achieve specific goals (Stumps et al., 2012). This is important in nursing because it is how nurses deal with situations and how competent they are in their roles. I examined if there were differences in terms of rural ED nurse preceptors' self-efficacy before and after they had an educational PowerPoint presentation. The rest of the self-efficacy statements were statistically significant, supporting that rural ED nurse preceptor education improves self-efficacy.

Adult Learning Theory

The conceptual model for the education program was Knowles' adult learning theory. This theory involves addressing the way adults learn, their motivations for learning, and how their experience influences their learning. Preceptors are adults learners and bring their experiences with them to guide their learning of new material. Educational material involved areas of reflection and thought-provoking questions regarding learners and their previous experiences as preceptees. This allowed adult learners to reflect on their experiences and how they can influence their roles as preceptors. It also included additional educational material on precepting to triage and providing effective feedback. These areas may be new to preceptors, which is why they are important to include. The educational PowerPoint presentation provided examples of effective feedback and the triage precepting process, which allowed preceptors to use this information in their practice.

Kirkpatrick's Evaluation Theory

Kirkpatrick's model for evaluation of continuing education is the evaluation model which was used in this study. Kirkpatrick's model involves determining and evaluating results and effectiveness of an educational program. Preceptors were asked to provide feedback regarding the quality of education, improvement of knowledge, and improved self-efficacy after online education was administered. This theory has four levels; however, for this study, only two levels were assessed due to time constraints. The continuing education evaluation for provider-paced activities tool was used to ascertain what preceptors believed was beneficial from the PowerPoint presentation and what was

not. From this, it was found that participants believed that the informational PowerPoint presentation was beneficial, and they were satisfied with it. In addition, 87.9% of participants believed that a change of knowledge had taken place after viewing the informational PowerPoint presentation. The continuing education evaluation for provider-paced activities tool was used to specifically ask preceptors if they understood the content presented in the informational PowerPoint after they had read the PowerPoint presentation. Most participants strongly agreed they understood the content of the informational PowerPoint presentation.

Limitations of the Study

The following limitations were recognized in Chapter 1 and could have potentially affected the study's outcomes. The first limitation involved recruitment and response rate of participants due to the COVID-19 pandemic. There was a small sample size of 3 subjects who participated in this study; however, 40 subjects had filled out the pretest, leaving a response rate of 82.5%. Another limitation was the lack of random sampling and focus on one nursing specialty in the rural Northeastern US. This limits the generalizability of the study to Northeastern US rural EDs. However, rural ED preceptors are an under researched area, so focusing on this helps address a gap in literature. Data were collected from subjects who are members of a Facebook group that is located within the Northeastern US; therefore, generalizability of results of this study is limited to rural ED nurses who are part of this Facebook group. In addition, another limitation was the small sample size. There were only 33 participants, which was a low number, however, was bigger than the sample size of 32 calculated by G*Power. The time between the

pretest and posttest was yet another limitation of this study. There were 4 weeks between the two tests because time was needed for individuals to use information and change their behaviors. Time between tests influenced the number of participants who took the posttest because it was online, leading to some to forget to take the posttest. Of the 40 participants who filled out the pretest, 34 of them filled out the post-test; one of the posttest unique identification codes did not match any of the pretest codes and was thrown out.

Recommendations

Findings of this study indicate that there was a significant difference between rural ED nurse preceptors' self-efficacy and knowledge after they reviewed an informational PowerPoint presentation. Results can promote positive social change by supporting the need for standardized preceptor education, especially in rural areas which tend to have more associate's degree-prepared nurses. Therefore, the results of this study support the need for more research regarding preceptor education in rural EDs.

For this study Kirkpatrick levels one and two were utilized. Future authors should examine levels three and four by performing longitudinal studies and evaluate the long-term effects of rural ED nurse preceptor education. Researchers could evaluate the Kirkpatrick's third level by surveying both preceptors and preceptees after the education has been given and after the orientation process is over to see if it changed the behavior of the preceptor. In addition, researchers could look at the retention rates of new ED nurses and job satisfaction rates of both the preceptors and preceptees over time. Long-term evaluation of rural ED preceptor education and its effects on retention rate, patient

outcomes, and nurse satisfaction would be beneficial to increase the literature on this topic and help address the gap in the literature. This would be especially important to address because it could support positive social change in practice such as improved patient outcomes and safer staffing due to the possibility of increased nursing retention rates.

Another recommendation would be to have a larger sample size and sample rural ED nurse preceptors from other areas in the US. This study had a small sample size of 33 rural ED nurse preceptors. In addition, all the nurse preceptors were from the Northeastern US, which decreases the generalizability of the results. Nurse preceptor education has been shown to improve patient outcomes (Cotter & Dienemann, 2016; Urlich et al., 2010). However, there is no standardized preceptor nurse education, especially in rural EDs leaving these areas behind and preceptors who are ill prepared for their role (Emergency Nurse Association, 2018; Kennedy, 2019). Authors should include a larger sample and more geographical areas to improve the generalizability and support the need for rural ED nurse preceptor education.

It is also recommend including future research on the content of rural ED nurse preceptor education. Overall, the subjects in this study were satisfied with the informational PowerPoint. However, authors can survey a broader sample and ask what they believe is important in their education and what content is needed. This can help improve the standardization of nurse preceptor education and tailor it to what rural ED nurse preceptors believe they need information on to perform their role. In addition, authors can also compare two groups of preceptors, those who had previous education,

and those who had no previous education to see what topics they deem valuable in their education. Also, they could examine if having precepted between the time of the pre-test and post-test had an effect on the data. Additionally, authors could also examine the effects of a simulation scenario on preceptor self-efficacy and knowledge. Because this study took part in the Covid time regulations, it was not feasible to do in person simulations or education, however, future authors could look at the effects of an informational PowerPoint and simulation scenario on rural preceptor self-efficacy and knowledge.

In addition, authors could look at the differences in patient outcomes and preceptees' views on orientation between rural ED nurse preceptors who had education and those who had no education. By doing longitudinal studies that look at this, it could also provide support for the need of education, based on the results of which are obtained.

Finally, authors should also look at whether nurse preceptor education needs to be a one-time thing, or annual education/competency. In this study, 69.7% of the participants had no previous preceptor education, whereas only 30.3% had previous preceptor education. It would be beneficial for future studies to also compare the self-efficacy and knowledge of preceptors who have had previous preceptor education and those who have had no previous preceptor education. Continuing education has been shown to facilitate workplace transitions, providing quality patient care, improve career opportunities, and increase job satisfaction (Price & Reichert, 2017). Because of this, it would be beneficial to investigate whether annual nurse preceptor education had added benefits instead of a one-time educational seminar, in addition to table-top simulation.

Implications

Positive Social Change

The results of this study could contribute to positive social change in rural areas. This study determined that rural ED nurse preceptors who completed the informational PowerPoint had an increase self-efficacy and knowledge. The literature supports that the quality of the preceptor knowledge and skills has an impact on the role adaptation and critical thinking of new nurses in various settings. Improving the education of nurses new to the ED can improve the clinical abilities and critical thinking of new hires. This may result in improved safety and clinical outcomes for patients admitted to rural EDs.

Implications at National and Local Level

The ENA recommends standardized preceptor education; however, many areas do not have this in place. Because rural areas have a higher percentage of associate degree nurses whose knowledge base may be limited, increasing the risk that they precepting they provide may not be evidence-based (Probst et al., 2019). In addition, rural areas are more likely to have a nursing shortage due to the fewer number of nursing schools and lack of resources that urban areas have (Burrows et al., 2012). Because of these issues, hospitals have to provide the education necessary to produce competent new graduate nurses who can transition into their nursing role successfully and have the necessary knowledge and skills. By providing standardized preceptor education, especially in rural critical care areas such as the ED, it can improve patient outcomes, nursing satisfaction, and nurse retention (Horton et al. 2012, Melrose et al., 2015; Pasila et al., 2017; Watkins et al., 2016). By providing standardized nurse preceptor education it can help improve

patient outcomes and nursing abilities throughout the country, especially in local rural areas. In addition, local rural hospitals can continue to research this phenomenon and the content needed in order to provide competent nurse preceptors to the new graduate nurses.

Implications for Nurse Preceptors

Many nurse preceptors feeling inadequate and that they are do not have the support they need in their role (Chang et al., 2015). Preceptors need to feel supported and have the necessary education to improve their self-efficacy and their knowledge. By supporting nurse preceptors and giving them standardized education, it cannot only improve their experiences, but the experiences of the nurses they orient. In addition, by showing the importance of education, it can lead to the allocation of the necessary resources of preceptors to be successful in their role.

Implications for Preceptees

Standardized nurse preceptor education not only benefits nurse preceptors, but also those they are orienting. Having competent nurse preceptors provide new nurses with the support and knowledge they need to integrate into their new role and environment (Tiew et al., 2017). Properly educated nurse preceptors can empower their preceptees and also improve their nursing practice while also positively influencing retention rates in preceptees. By having proper orientation, new graduate nurses have improved competency and skills in the clinical setting (Nielson, 2017).

Conclusion

According to this study rural ED preceptor education improved both preceptor self-efficacy and knowledge. This study supports the need for standardized preceptor education for all nurses. It especially indicated that rural ED nurse preceptor education helps preceptors carry out their role as a preceptor and their knowledge of teaching and learning. All of this is important especially to rural ED preceptors where acuity and quantity of patients fluctuate daily. Also, rural areas are comprised of primarily associate degree prepared nurses who may lack the education necessary to take on the preceptor role, reinforcing the need for standard preceptor education (Health Resources and Services Administration, 2013; Newhouse et al., 2011; Urlich et al., 2010). Providing preceptors with the necessary education helps improve the precepting experience for both preceptors and preceptees, leading to an increase in nurse retention, acquisition of necessary critical care skills, and an improvement in patient outcomes (Cotter & Dienemann, 2016; Horton et al., 2012; NSI, 2016; Watkins et al., 2016). It also has the ability to promote positive social change by promoting standardized nurse preceptor education which can improve patient outcomes and nursing abilities in local rural areas.

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Appendix A: Permission for Use of Preceptor Self-Efficacy Instrument

Hello Katherine,
Thank you for your inquiry. Attached is the demographic questionnaire and the self-efficacy instrument you requested. The reliability and validity information for the instrument is reported in the following articles:

- Parsons, R. (2007). Improving Preceptor Self-Efficacy Using an On-Line Educational Program. International Journal of Nursing Education Scholarship, 14(1), article 21.

- Larsen, R. & Zahner, S. (2011). The Impact of Web-delivered Education on Preceptor Role Self-efficacy and Knowledge in Public Health Nurses. Public Health Nursing, 28(4), 349-356.

I would prefer that you not publish the instrument in its entirety in your dissertation. You can however use sample questions.
Best of luck on your research.
Rachelle

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Appendix B: Preceptor Self-Efficacy Instrument

The following are sample questions from Parson's preceptor self-efficacy presented here based on the terms granted to use in this dissertation (2007).

Preceptor Self-Efficacy Questionnaire

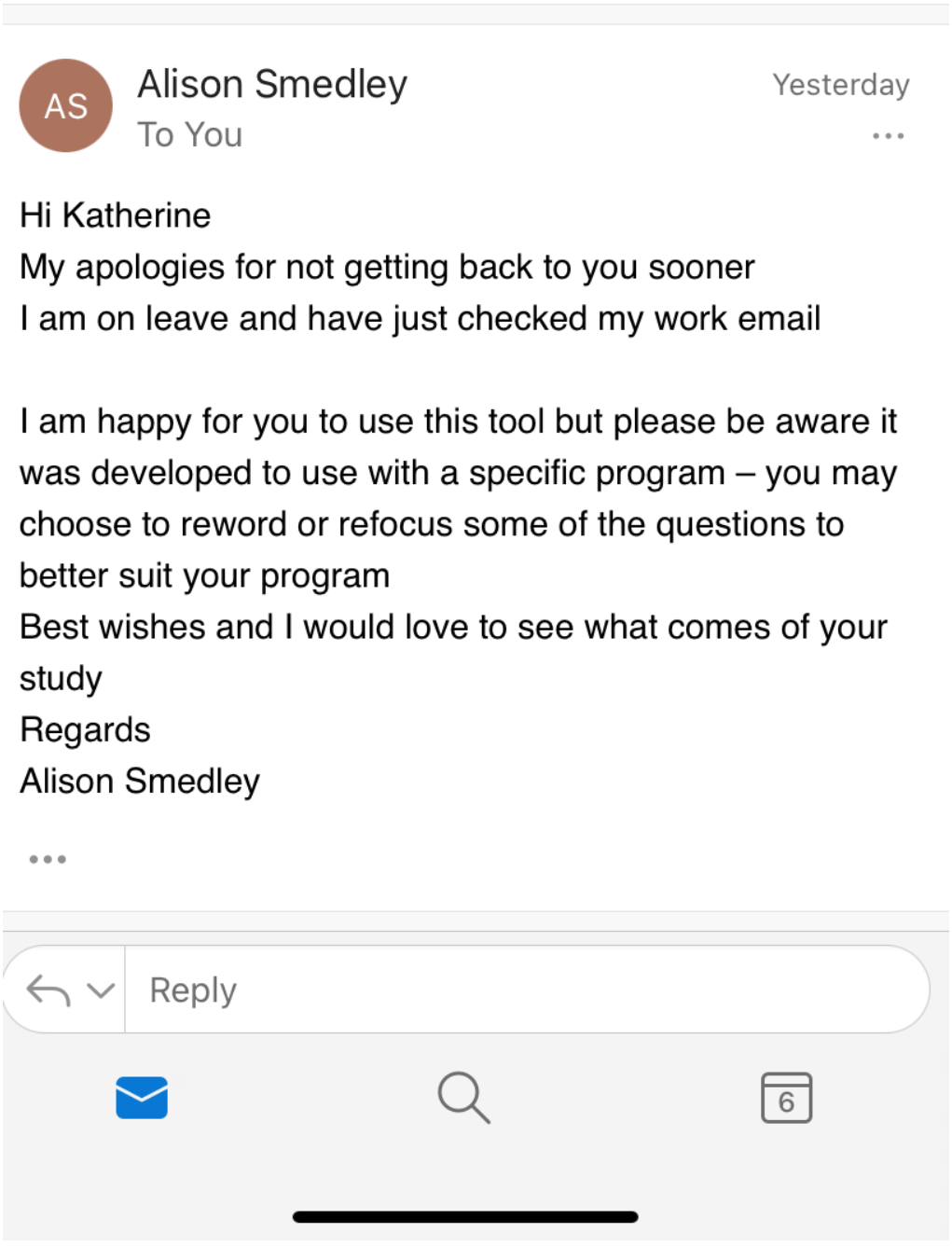
Please circle the most appropriate response for each item below.
Using the following scale:

1 = Completely lacking in confidence
2 = Somewhat lacking in confidence
3 = Somewhat confident
4 = Very confident

How confident are you that:

1.	You have the ability to carry out your role as preceptor.	1	2	3	4
2.	You can provide verbal feedback to preceptees about their performance.	1	2	3	4
3.	You can provide constructive feedback.	1	2	3	4
4.	You can support preceptee ideas even when they are incongruent with your own.	1	2	3	4
5.	You can provide verbal feedback to preceptees about their performance.	1	2	3	4
6.	You can deal effectively with conflict in the preceptee/preceptor relationship.	1	2	3	4

Appendix C: Permission for Use of Change Knowledge of Teaching and Learning Scale



Appendix D: KTL

Complete the following based on your knowledge	Strongly Disagree	Disagree	Agree	Strongly Agree
My knowledge of teaching and learning models used in the clinical environment	1	2	3	4
My understanding of the teaching and learning process	1	2	3	4
Learning through reflecting on my own nursing practice	1	2	3	4
Ability to think critically about problem-solving	1	2	3	4
Understanding of the adult learning	1	2	3	4

Appendix E: Demographic Tool

Participant Demographic Sheet

Directions: Please provide a response for each of the following questions:

1. What is your highest level of education?
    - Associate's degree in nursing
    - Bachelor's degree
    - Master's degree
    - PhD/DNP
2. What was your original nursing degree?
    - Associate's degree in nursing
    - Bachelor's degree
    - Master's degree
    - PhD/DNP
3. Year of experience as a nurse?

    _____ years
4. How many years of preceptor experience do you have?

    _____ years
5. Have you had any previous preceptor education?
    - Yes
    - No
6. What is your Sex?
    - Male
    - Female

Appendix F: Continuing Education Evaluation

CONTINUING EDUCATION EVALUATION FOR PROVIDER-PACED ACTIVITIES

DIRECTIONS: Please circle the number that best reflects the extent of your agreement with the statement.

Scale: 1 = Strongly Disagree 2=Disagree 3= Neutral 4= Agree 5 = Strongly Agree

Measurement of Activity Outcomes (Circle One	**Rating**					
A change in my knowledge has taken place because of participating in this course.	**Yes**		**No**			
Offering Objectives After the completion of this module, the participant will be able to:						
1. Identify a minimum of three common characteristics of effective preceptors.	**1**	**2**	**3**	**4**	**5**	**N/A**
2. Analyze one common theory, concepts, or framework as it relates to the orientation process in the ED setting. 3.	**1**	**2**	**3**	**4**	**5**	**N/A**
4. Develop and implement a learning plan with a preceptee based on his or her needs and goals. 5.	**1**	**2**	**3**	**4**	**5**	**N/A**
6. Identify proper precepting to triage techniques	**1**	**2**	**3**	**4**	**5**	**N/A**
Content						
1. Content was relevant to the objectives	**1**	**2**	**3**	**4**	**5**	**N/A**
2. Content was consistent with the stated program objectives and goals	**1**	**2**	**3**	**4**	**5**	**N/A**
3. Teaching methods were effective for the content	**1**	**2**	**3**	**4**	**5**	**N/A**
4. Audiovisual/handout materials were effective	**1**	**2**	**3**	**4**	**5**	**N/A**

COMMENTS:

Appendix G: Emergency Nurse Preceptor Informational PowerPoint

ED Nurse Preceptor Education Seminar

Revised from the education tool *Supportive Learning for Clinical Preceptor I Course and Clinical Coaching Education Program for Clinical Nurse Educators* developed by C. Garner, DrPH, MSN, MPA, RN and K. Kaldawi, Ph.D., RN

One: The Preceptor

Welcome to the education seminar on preceptor. In our country, we are experiencing a nursing shortage due to the aging of the workforce (Halstead & Frank, 2011). This can cause patient safety problems and burnout among nurses due to overtime hours (Sroczynski et al., 2012). Because of the shortage of nurses, it is important to give new nurses the resources they need to be successful while also improving the retention of nurses. One way to do this is to provide an extensive orientation to the nurse role. Orientation to a new role is necessary, so the individual does not feel overwhelmed by the new role's expectations (Anderson, 2009; Grassley & Lambe, 2015; Mann-Salinas, et al., 2014)

Preceptorships are time-defined relationships which goal is to help new nurses become proficient in their new role as a practicing nurse (Barker & Pittman, 2010). These individuals help bridge the gap of theory to practice in nursing (Earle-Foley, Myrick, Luhanga, & Younge, 2012). Purpose of precepting is to help ease the transition of the nurse into their unit and nursing practice.

Preceptors:

- Teach
- Helps new nurses experience day-to-day nursing practice
- Helps develop clinical competence
- Evaluates and provides feedback on nurse's performance

Role of the preceptor:

- Planner
- Role model
- Facilitator of learning
- Evaluator of learning
- Socialization
- Facilitator of role transition
- Help new nurse acquire clinical skills
- Support system

Importance of precepting

- Increased retention
- Turnover in first year 20-40%
- Increased job satisfaction
- Decreases anxiety in new nurses
- Reduced medication errors
- Facilitates critical thinking
- Increased job satisfaction

- Increased patient safety and quality of care
- Better patient outcomes

Research has shown that the better the nursing orientation is, the higher the retention rate for new nurses (Horton et al., 2012; Pasila, Elo, & Kaariainen, 2017). This is due to increased satisfaction because the new nurses obtain support in their new role and socialize into their new environment. In addition, 40% of new nurses are likely to commit a medication error, but this percentage has shown to decrease with a nurse preceptor program. It has also been found that 65-75% of new graduate nurses do not meet the expectations for clinical judgement and are unable to translate theory into practice (Ulrich, et al., 2010). By having a preceptor, this gives new nurses the support, time, and guidance to further their clinical thinking skills and their nursing practice (Watkins, Hart, & Mareno, 2016). The new graduate nurses who have participated in a nurse residency program have higher levels of job satisfaction due to their relationships with the preceptors who have facilitated their development of nursing skills and transition into the nursing practice.

Characteristics of Exceptional Preceptors –Is this you?

- Organized
- Value interactions with others
- Positive attitude
- Relates well to new nurses
- Competent
- Strong communication skills
- Models professional behavior
- Provide frequent and appropriate feedback to preceptees
- Question new nurses to promote critical thinking
- Provide positive environment

Exceptional preceptors need to be able to express their knowledge and skills to others (Rebholz & Baumgartner, 2015). These individuals use a learner-centered curriculum ideology, which focuses on teachers who create an environment that is friendly and helps students learn and grow through interactions and their learning preferences. These preceptors are also able to identify learner needs and build trusting relationships with their students. They are approachable and have strong communication skills, which help reduce conflict. These individuals support the nurse and model professional behavior for them. These individuals are patient and up to date on current practices, so they are able to share their knowledge with their students. Exceptional preceptors are non-judgmental and have learned from their own experience. These individuals reflect on their past experiences with preceptors and teachers and envision how they should act as preceptors and how to treat their new nurses.

Barriers to Precepting

- Negative effect on productivity
- Practice does not include students
- Uneasiness with teacher role
- Short duration of precepting relationship

- Lack of preceptor preparation
- Large work load
- Staying up to date with best practice and current hospital policies

Two: Communication and Conflict

Effective Communication: Strategies to Enhance Learning Environments

- Open communication
- Assertive
- Active listening
- Eye contact
- Appropriate body language

Conflict Resolution

- Identify the problem
- Discuss possible solutions
    - Take responsibility
    - Agree to disagree
    - Allow venting
    - Establish ground rules
        - Honesty
        - Listen
        - Support feelings with facts
    - Ask open-ended questions
    - Listen objectively
    - Restate problem, set goals, establish action plans
- Follow-up and analyze solutions

Three: The Adult Learner

The adult learning theory believes that adult students learn best when being allowed to use their past experiences and are actively involved in their learning (Keating, 2015). Adult learners prefer learning situations, which integrate new ideas with existing knowledge, make the most of their experiences, allow choice and self-direction, and are practical and problem-centered. According to this theory, adult learners are self-directed, practical, problem-centered, and able to relate their new knowledge to their life experiences and previous knowledge (Billings & Halstead, 2016; Merriam et al., 2007). In addition, according to this theory, adults need to have a reason for learning for it to be successful and are driven by internal factors to learn (Billings & Halstead, 2016; Knowles et al., 2015).

Adult Learners

- Self-directed
    - Relate new knowledge to life experiences/previous knowledge
- Goal-oriented
- Must have a reason for learning
- Practical
- Desire to be recognized and respected.

Millennials vs. other generational groups

Sanford and Tipton (2016) found that experienced nurses who became preceptors had different learning styles than the new nurses due to the generational gap. Because of this, it is important to assess the background of the new employee and the preceptor. Preceptors need to understand where the new nurse is coming from and what they bring to the table. Today, most new nurses are from the millennial generation. Millennial learners have a positive and confident personality (Billings & Halstead, 2012). They seek structure, but also like freedom. They tend to be team oriented and they lived immediate feedback. In addition, adult learners prefer learning situations, which integrate new ideas with existing knowledge, make the most of their experiences, allow choice and self-direction, and are practical and problem centered. They also want to be actively involved in their learning process and need to have a reason for learning. The generation X groups are those baby boomers. These individuals are able to manage their time and complete their work without supervision. This group is comfortable with change, but may need more time learning new computer charting and programs.

Learning Theory

A learning theory attempts to explain how an individual learns. In this course, we will focus on Malcolm Knowles's adult learning theory because most nurses are adult learners. This theory states:

1. We learn by doing. Allow the student to do the task, no matter how slowly.
2. We learn by focusing on one task. Focus on developing a single task each day.
3. We must be ready to learn new materials/tasks. Assess your student to determine a readiness to learn new material.
4. We must be motivated to learn.
5. We must have immediate reinforcement of learning. Discuss the learning experience and its value to your student.
6. The learning situation must have meaningful content. The planned learning experiences must relate directly to the care processes on the unit.
7. Responses to the learning situation will vary. You may have a different perception of the learning experience than your student.
8. The learning atmosphere will have an impact. When you allow your student to make mistakes without humiliation, trust will ensue.
9. Backgrounds and physical abilities will vary. You will have different dexterity skills than the student."

Principles of Teaching-Learning

Learning styles vary from person to person and each individual has a preference on how they like to learn. Because of this, preceptors need to understand the different learning styles and how to teach an individual who has a preference in each of the styles. The preceptor needs to be able to recognize the level of knowledge the preceptee has and support them to continue to learn. To understand a nurse the preceptor needs to understand where on **Benner's skill acquisition theory** they fall. By the end of

orientation, hospitals want to advance nurses to the competent role (Kowitlawakul, 2013). Because of this, preceptors need to understand the skills acquisition of the new graduate nurses (Billings & Halstead, 2012). Preceptors need to understand where their preceptees are in this chart to understand how to help them adapt to their new role and acquire the skills they need to become competent ED nurses.

- Novice nurses- have no experiences in situations, which they are expected to complete; these are nursing students and new graduate nurses. These individuals tend to be task oriented.
- Advanced beginner nurses-are those nurses who demonstrate acceptable performance in real nursing situation. These individuals still require help from experienced nurses or preceptors.
- Competent nurses- start to analyze problems, set long-term goal, and recognize patterns. This group is organized, efficient, and able to analyze what patient conditions need immediate attention and what conditions can wait.
- Proficient nurses- takes in information as a whole instead of little parts and have a deep understanding of situations. These nurses have advanced critical thinking skills and decision-making skills.
- Expert nurses – has a large amount of experience and deep understanding of the whole situation.

Taxonomy

Bloom's taxonomy is used to understand the levels of learning. This includes

1. Remember
2. Understand
3. Apply
4. Analyze
5. Evaluate
6. Create

Domains of learning

- **Cognitive:** Cognitive learning domain focuses on factual knowledge and deals with acquiring, processing, and using knowledge learned. New nurses must have previous knowledge of patient conditions and learn from the experience of their preceptor how to acquire and process the new information they receive throughout a shift. Affective learning involves one's attitude and value of learning. This is when a person is open to new information or experiences. Psychomotor learning is the understanding of physical skills. This includes observing one's preceptor perform a skill a new nurse has never performed before.
    - **Fact**
        - A simple concept
        - Ex: what is a complication of pancreatitis
    - **Understanding**
        - putting two or more concepts together
        - Ex: what is the difference between a beta blocker vs a calcium channel blocker?

    - **Application**
        - Put together concepts to form something new
        - Ex: why would a doctor use a calcium channel blocker in a patient?
- Affective: Affective learning involves one's attitude and value of learning. This is when a person is open to new information or experiences
    - **Awareness**
        - Describe the status of the patient
    - **Distinction**
        - Able to distinguish between normal and abnormal findings in a patient
    - **Integration**
        - Integrate patient findings into the nursing care plan and treatment
- Psychomotor: Psychomotor learning is the understanding of physical skills. This includes observing one's preceptor perform a skill a new nurse has never performed before.
    - **Imitation**
        - Demonstrate skill back to preceptor
    - **Practice**
        - Performs skill repeatedly
    - **Habit**
        - Becomes a regular skill and is an experienced nurse

Learning Styles: Learning styles vary from person to person and each individual has a preference on how they like to learn. Because of this, preceptors need to understand the different learning styles and how to teach an individual who has a preference in each of the styles. **Auditory** learners learn best by talking and listening to individuals. Preceptors can tailor to these individuals by briefing these new nurses on the patient and situation, discussing patient scenarios, and verbally summarizing the day. **Visual** learners prefer written information, body language, charts, and pictures. To tailor to these individuals preceptors can find extra material on diseases, treatment, and procedures to supplement what the new nurse learned throughout the day. The last learning style, **kinesthetic** leaners, prefer hand-on approaches and learn by practicing and demonstrating skills. Preceptors can modify their teaching strategies to these individuals by having their preceptees demonstrate new hands-on skills such as hanging blood, starting IVs, or putting in urinary catheters.

Four: Effective feedback and evaluation

When evaluating a preceptee and going over the day, always start with the positive and tell them what they did well during the day It has been shown that regular feedback improves nurses' performances, improves their judgment, and they learn faster than those who do not get regular feedback. Effective feedback needs to be immediate, regular, clear, have positives, objective, and be honest. During feedback the preceptor needs to let

the new nurse know what they need to improve and help them plan a course of action to improve their weaknesses. When giving feedback to a preceptee a preceptor should:

- Identify the purpose of the feedback
- Identify nurse's strengths and positives of the shift
- Identify areas that need improvement and need additional attention
- Need to back up all of one's remarks with specific evidence
- Make sure the nurse understands the feedback

Basic Principles of Giving Feedback

- Ask permission or identify that you are giving feedback. "I would like to provide you with some feedback on what I observed today, how did caring this patient/family make you feel? What are your main concerns?"
- Use the first person: "I think, I saw, I noticed, I wonder."
- Ask the student to describe that they were thinking about during the experience, what sources of knowledge influenced/should have influenced their thinking, and what past experiences helped make sense out of the current situation.
- Give feedback in a "feedback sandwich." Start with a positive observation. Provide the critical observation and a suggestion on how to improve.
- Describe what you observed and be specific. State facts, not opinions, interpretations, or judgments
- Do not be judgmental or use labels.
- Do not exaggerate. Avoid terms such as always or never unless this is truly the case.
- When making suggestions for improvement, use statements like "you may want to consider, "or what will you do differently moving forward?
- Feedback should address what a person did, not your interpretation of his or her motivation or reason for it.

Five: Precepting to triage

Triaging is a necessary skill and area in the emergency department. When precepting to triage it is important for the preceptor and preceptee to have a trusting relationship and strong communication skills. The purpose of triage orientation is for the new nurse to gain confidence, understand the triage nurse role, and obtain tips to enhance productivity at triage. The preceptor needs to educate new triage nurses on:

- Risks related to triage
    - Documentation practices
    - Reassessment
    - Malpractice
- Necessary triage documentation
- Prioritization of patients
- Rapid triage assessment vs. comprehensive triage assessment
- Patient flow
- Acuity assignments
- Priority setting (aka who needs a room in the main ED first and who can continue to wait in the waiting room)

- Awareness of high acuity presentation and red flags
- Policies and procedures
- Resource availability

Preceptors need to educate the preceptees on how to communicate with the doctors and other nurses and explain thoughts during triage so the preceptee can understand what does through a triage nurse's head. They also need to orient the preceptee to the triage environment and the location of essential triage equipment. Debriefing also needs to occur after each patients. At the end of precepting to triage:

- Make sure preceptee has the technical skills for triage
    - Assigns correct acuity levels
    - Follows procedures and protocols
    - Appropriate critical thinking
        - Do they identify red flags
        - Apply lessons and what they have learned from previous events and patients
        - Connect risk factors to presentation of patients
    - Interpersonal skills
        - Do they communicate with other effectively?
        - Respect all patient populations
        - Can they manage aggressive patients safely?
    - Correct documentation