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Effects of Anxiety Reducing Interventions on Performance Anxiety in Graduate Nurses

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A dissertation  
presented to  
the faculty of the College of Nursing  
East Tennessee State University

In partial fulfillment  
of the requirements for the degree  
Doctor of Philosophy in Nursing

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by  
Georgita Liat Tolbert Washington

December 2009

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Sally Blowers, PhD, RN, Chair

Joel Hillhouse, PhD

Tamera Pearson, PhD, RN

Patricia Vanhook, PhD, RN

Keywords: new nursing graduates, performance anxiety, transition to professional nursing

## Abstract

Effects of Anxiety Reducing Interventions on Performance Anxiety in Graduate Nurses

by

Georgita Liat Tolbert Washington

Every new nursing graduate is challenged to successfully transition from student to professional nurse. The stress involved in that transition can manifest itself as performance anxiety, a type of anxiety occurring when someone is the focus of attention and is fearful of interactions or of being humiliated or embarrassed. It occurs only in specific situations. The new graduate's performance is the focus of attention and evaluation. Further, the need to interact with other professionals, patients, and families can create anxiety about performance. No studies have examined performance anxiety in graduate nurses.

Use of cognitive behavioral therapy, progressive muscle relaxation, and reflective journaling has demonstrated reduction of performance anxiety in musicians and actors. There have been no studies evaluating these interventions in new graduate nurses or in combination to reduce performance anxiety in any population.

Peplau's theory of interpersonal relations suggests that relationships play a significant role in mediating anxiety. Because most graduate nurses work with a registered nurse preceptor, it is likely that relationships with preceptors and the level of perceived support from those preceptors could influence the success of transition as well as new graduates' anxiety.

Using a quasi-experimental, mixed method design, the sample was drawn from 2 classes of new graduates participating in a 6-month nurse residency program. Participants self-administered instruments measuring performance anxiety, preceptor relationships, and perceptions of preceptor social support, and were asked to journal weekly. Open-ended questions indicated their feelings about the intervention and its usefulness.

This study verified the presence and level of performance anxiety in the sample. Results revealed a decrease in performance anxiety in both treatment and control groups but no significant influence of preceptor relationship or perceived preceptor support. Analysis of qualitative data revealed that the majority of participants were not engaged in the intervention and did not value it.

Performance anxiety did not appear to negatively impact new graduate transition. No additional insight was gained about the preceptor and newgraduate relationship because the majority of participants' interactions remained at the initial level identified in Peplau's theory.

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## DEDICATION

The journey to this point in my life has been a 6-year testimony. An experience with breast cancer introduced a speed bump along the way, which makes the journey even more special. This work is dedicated to all breast cancer survivors and is in honor of those who have lost the battle.

## ACKNOWLEDGEMENTS

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I would like to thank my colleagues, church family, and friends who encouraged me and asked often about my progress. To the team members in the Learning Resource Center who helped me find resources, and shared their space with me; thank you.

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## CHAPTER 1

### Introduction

#### *Transition from Student to Professional Nurse*

The majority of nurses employed in this country work in hospitals (Buerhaus, Donelan, Ulrich, Norman, & Dittus, 2006). With the supply of experienced nurses decreasing and the demand for nurses increasing, hospitals have concentrated on hiring new graduate nurses (Beecroft, Kunzman, Taylor, Devenis, & Guzek, 2004; Santucci, 2004), who now represent as much as 10% of the nursing staff (Berkow, Virkstis, Stewart, & Conway, 2009). As they enter the workforce, new nurses today face a challenge experienced by every graduate nurse; successful transition from student to professional nurse (Sewell, 2008). The stress inherent in making that transition, which includes achieving competency along with functioning in the difficult environment of contemporary nursing practice, can produce significant levels of anxiety in new graduates. This anxiety is both interpersonal and intrapersonal in nature and is an additional stressor that affects their performance as well as impacts transition. Interventions designed to reduce this anxiety can potentially enhance new graduates' job performance to the benefit of the graduates, their employers, and the nursing profession. It is important to facilitate the transition to professional nurse by identifying and mediating those factors that influence transition.

#### *The Tasks of Transitioning*

To attain a successful transition, new graduates must reconcile their perceptions and expectations of themselves with those of their employers (Fontaine & Norton, 2001; Hoffman, 2001; Menzel, Katz, Menting, & Laack, 1998; Young, Stuenkel, & Bawel-Brinkley, 2008). Nursing schools have prepared their graduates as generalists to pass the NCLEX and expect

employers to continue any population specific education. Employers, on the other hand, expect new graduate nurses to enter the workplace prepared to care for patients of all kinds, with minimal need of any further education (Berkow et al., 2009).

These conflicting expected outcomes place pressure on new graduates to perform up to the employers' expectations (Casey, Fink, Krugnan, & Propst, 2004; Disch, 2001; Godinez, Scheiger, Gruver, & Ryan, 1999; Kelly & Courts, 2007; Thomka, 2001). New professional registered nurses must integrate academic theoretical knowledge and ideal practices with the reality of patient care as it exists in healthcare institutions (Hardyman & Hickey, 2001; Schoessler & Waldo, 2006a; Schoessler & Waldo, 2006b; Wong, 2000) as well as learn the work environment and how to interact with the other members of the healthcare team.

#### *Factors Affecting Transition from Student to Professional Nurse*

New graduates themselves have identified many factors that influence their transition into the workplace. These include lack of confidence, mistakes made due to workload and responsibilities, frequent new situations, feeling overwhelmed, and getting to know the existing staff (Oermann & Garvin, 2002). They feel inadequately prepared for the workplace (Gerrish, 2000; Kramer, 1974), are very apprehensive about interacting with physicians, and feel as if the facility expects too much of them too quickly (Duchscher, 2001). Other concerns include lack of experience and organizational skills, administering medications, managing a large group of patients, and learning new procedures. They also have the internal pressure of wanting to be the best and of avoiding the perception of having to rely on others (Oerman & Garvin; Oerman & Moffitt-Wolf, 1997).

The healthcare system itself adds to new graduate transition challenges. Often hired into evening and night shift position, they have fewer resources and less support. On these shifts, they



often have to be more independent than they are prepared to be (Almada, Carafoli, Flattery, French, & McNamara, 2004). This reinforces their perception that employers have unrealistic expectations of them as they go through their transition (Lavoie-Tremblay, Forcier, Lafrance, & Lebeouf, 2002).

An essential element in the transition of new graduates is the manner in which they are socialized and oriented into the unit and facility (Baggot, Hensinger, & Parry, 2005; Reising, 2002). The preceptor model is widely used to facilitate this transition and socialization to professional practice and may have a positive or negative influence on how new graduates perform (Hardyman & Hickey, 2001; Hyrkas & Shoemaker, 2007). Preceptors must be nurturing, socially supportive, and caring role models to help ease this transition. The qualifications and willingness of the preceptor to serve in this very important role of teacher, coach, evaluator, learning facilitator, and clinical and knowledge expert will have a major impact on new graduates successful transition (Everhart & Slate, 2004; Phillips, 2006; Roche, Lamoureux, & Teehan, 2004).

#### *New Graduate Responses to the Factors Affecting Transitioning*

New graduates perceive these factors affecting transition as threatening because they feel that their reactions to any of them will determine how other nurses think of them. They are overwhelmed by the questioning and criticisms and by their need for acceptance by existing staff. Observation and evaluation as they become more and more responsible for patient care induces anxiety. Those elements along with the high expectations of the staff and those they have of themselves all negatively affect their transition and performance (Duchscher, 2001; Ellerton & Gregor, 2003; Kim, 2003; Lavoie-Tremblay et al., 2002; Meisenhelder, 1987; Reddish & Kaplan, 2007). These feelings may prevent new graduates from asking appropriate questions and

impact their ability to display their knowledge and perform clinically (Hinds & Harley, 2001). They want to avoid being eventually perceived as incapable of performing as a professional nurse (Duchscher).

New graduates have said that they need social support and guidance from preceptors, acceptance and support by experienced nurses in the unit, help with preparation for the responsibilities they will have, and assistance with practical knowledge and building confidence (Finfgeld-Connett, 2005; Godinez et al., 2007; Whitehead, 2001). This help will impact their socialization into the unit, their professional development, their self-concept, and their retention in the workplace and profession (Kelly & Courts, 2007; Reising, 2002).

#### *Consequences of Unsuccessful Transitions*

The need for a successful transition is important because of the organizational, professional, and personal costs involved. If the transition process is too overwhelming, new graduates may leave the unit, facility, or the nursing profession before they have enough time to develop competent practice (Casey et al., 2004; Schoessler & Waldo, 2006a; Schoessler & Waldo, 2006b). This exacerbates the nursing shortage in general and places a financial strain on the institution due to constant recruitment efforts and replacement orientation costs (Altier, 2006; Contino, 2002; Thrall, 2007).

Research with new graduates has indicated that the most difficult time during the transition to professional nursing is the first 3 to 6 months of first time employment (Delaney, 2003), and that within 12 to 24 months many have changed positions in response to difficult transitions (Newhouse, Hoffman, & Hairston, 2007). This produces a turnover rate of approximately 35%-60% (Godinez et al., 1999; Schoessler & Waldo, 2006a; Schoessler & Waldo, 2006b). This high turnover results in high human resource deficits as well as institutional

financial losses for their orientation (Godinez et al.; Halfer & Graf, 2006; Marcum & West, 2004).

If problems persist without intervention, new graduates may not successfully complete the transition from student to professional nurse. These problems will affect both the hiring of new graduate nurses into positions and their ability to complete the probationary period. The problems may also affect their ability to transfer to a new nursing unit within the facility (Edelman & Ficorelli, 2005). They may perceive these events as failure and may experience personal trauma to their self-concept. (Goode & Williams, 2004; Pine & Tart, 2007), These perceptions may cause them to leave the profession altogether.

#### *Anxiety and the Transition from Student to Professional Nurse*

The factors identified by new graduates as influencing transition also play a dominant role in influencing feelings of anxiety about their performance, which then negatively affect their actual clinical performance (Oermann & Garvin, 2002). This anxiety may escalate to such a level that it causes them to leave or be asked to leave a unit or facility (Casey et al., 2004; Contino, 2002; Schoessler & Waldo, 2006a; Schoessler & Waldo, 2006b; Thrall, 2007).

The preceptorship model and relationship between preceptors and new graduates have been shown to be mitigating factors in the transition of new graduates (Chesnutt & Everhart, 2007; Oermann & Moffitt-Wolfe, 1997). This relationship is very important because the preceptor reflects the unit and the facility, and the preceptor and new graduate dyad will typically be together for the length of orientation. Because of the interpersonal nature of this relationship, new graduates' anxiety may be impacted.

### *Theoretical Connections to Anxiety*

Anxiety such as that caused by transitioning from student to professional nurse is a major intrapersonal concept in Peplau's theory of interpersonal relations. According to Peplau, behavioral responses to life events identify anxiety in individuals (Forchuk, 1993; Peplau, 1952/1991). These responses are often why individuals seek assistance in reducing their anxiety (Forchuk). In the context of this research, that assistance would come from individuals in the clinical environment but primarily from the preceptor.

The factors affecting transition that are identified by new graduates are both interpersonal and intrapersonal. Anxiety occurs intrapersonally due to the response to the factors affecting transition. It occurs interpersonally when having to interact with and be observed by others, and may be manifested externally as poor performance. The interpersonal relationship with preceptors also influences how new graduates perform during orientation.

### *Performance Anxiety*

A key component to new graduate transition is managing anxiety, which is necessary for a successful transition. When an individual has a fear of observation and evaluation and a fear of interacting with others, it is termed performance anxiety (Connor, Davidson, Sutherland, & Weisler, 1999). According to Hinds and Harley (2001), performance anxiety is one reason that new graduates do not experience successful transitions to the workplace. During clinical orientation, constant observation and evaluation is necessary to determine progress. This observation, along with their inexperience and insecurity increases their anxiety in the workplace (Kim, 2003; Lavoie-Tremblay et al., 2002; Sarason, 1984), specifically, their performance anxiety.

## *Summary*

According to Buerhaus et al. (2006), the continued shortage of nurses was attributed to decreasing enrollments in nursing schools, an aging and retiring nursing workforce, and unhealthy working environments. Allen (2008) reported that while the shortage improved since 2002, more than 41,683 potential nursing students have been turned away nationally because of a lack of qualified faculty. Whatever the reason for the shortage, there is an urgency by healthcare institutions for new graduate transition to occur as soon as possible after being hired. New graduate nurses are hampered in their ability to meet expectations when they must also deal with the accompanying anxiety about their performance (Duchscher, 2001). Identifying strategies to facilitate the transition from student to professional nurse and management of performance anxiety is vital and necessary to alleviate the personal costs to the new graduates, the financial costs to the organization, and the human costs to the profession. Cognitive behavioral therapy, progressive muscle relaxation, and reflective journaling are such strategies.

## *Significance of the Study*

This study is significant in that it will potentially identify a valid strategy for managing performance anxiety in new graduates during those important first 6 months of transition. This anxiety reducing intervention may facilitate the integration of new graduates into the workplace, help them become productive, and ultimately be useful as a retention strategy. This should affect both the human and financial costs to the organization.

Health care facilities spend between \$77,000 and \$92,000 in replacement costs per nurse, and they lose the cost of orientation and the potential productivity of every new nurse who resigns (Contino, 2002; Thrall, 2007). For specialty areas, the cost can increase to as much as \$145,000 per nurse (Atencio, Cohen, & Gorenberg, 2003). There are also the added replacement

costs of using contract labor or overtime until the hiring and orientation of competent nurses (Atencio et al.; Buerhaus et al., 2006; Contino). High turnover rates makes hiring new graduate nurses a risky proposition for nurse managers, patients, administrators, physicians, and existing staff (Seago, 2003). Therefore, exploring interventions to ease new graduate transition is very important to nursing.

### *Statement of the Problem*

The purpose of this research is to verify and clarify the level of performance anxiety in new graduate nurses and to evaluate the effectiveness of education about the interventions to reduce that anxiety. These interventions are a combination of cognitive behavioral therapy concepts, progressive muscle relaxation, and reflective journaling.

While acknowledging the many factors found in the literature that significantly influence the transition of new graduates to the workplace (Duchscher, 2009; Gerrish, 2000; Oermann & Garvin, 2002), performance anxiety is the phenomenon of interest for this dissertation research. When performance anxiety is present, new graduates can reduce it by confronting it, acknowledging it, and expressing their feelings about it. Encouraging them to verbalize anxiety will help them better manage its effects (Binding & Randall, 2004; Meisenhelder, 1987), and hopefully ease their transition into the workplace.

With high new graduate turnover rates (Godinez et al., 1999; Schoessler & Waldo, 2006a; Schoessler & Waldo, 2006b), there is a need to move beyond existing methods of transitioning new graduates. Research studies have suggested that while helpful, educational programs are not enough to support and retain graduate nurses. Assisting with new graduate transition has to move beyond the standard orientation and classroom activities, and the environment has to be supportive and conducive to their development. Organizations must also

help them discover how to help themselves achieve a successful transition. Therefore, identifying intrapersonal mechanisms to help new graduates manage performance anxiety is necessary (Beecroft et al., 2004; Peplau, 1952/1991; Schoessler & Waldo, 2006a; Schoessler & Waldo, 2006b).

Agencies employing new graduates should benefit from strategies that help reduce performance anxiety when such strategies improve retention in the practice setting and in the profession. An anxiety reduction program designed to give new nurses an outlet to acknowledge, understand, and express that anxiety as well as mechanisms to help manage their performance anxiety can provide a key strategy to support new graduate nurses.

Intuitively, the impact on retention would be immediately measurable for the organization. They could potentially see a decreased turnover rate along with decreased costs of constant orientation and an increase in job satisfaction. There would also be the potential of financial and human benefits in terms of a stable, more satisfied staff potentially being able to provide more effective and efficient assessments of complications and delivery of interventions. Discussion of the combination of cognitive behavior therapy or education about the concepts, progressive muscle relaxation, or reflective journaling in easing new graduate performance anxiety is not in the literature.

#### *Theoretical Perspective*

The theory of interpersonal relations originally intended to help nurses intervene more intelligently and sensitively in nursing situations with patients (O'Toole & Welt, 1989). This theory also infers that communication and good interpersonal relations lessen anxiety (Feely, 1997). Because anxiety is a major concept in the interpersonal relations theory, and both internal

and external factors are involved in new graduates' experiences with performance anxiety, this theory is appropriate for this study.

The interpersonal aspects of the theory focus on processes and relationships, not the individuals involved. Intrapersonal processes are those that occur internally, within the individual, as opposed to those occurring between individuals (Forchuk, 1993). In the context of this study, the relationships between preceptors and new graduate nurses are interpersonal processes. The individual nurse's responses to the tasks of transitioning are considered intrapersonal processes.

Peplau (1952/1991) stated that clinical experience can be used to develop nursing knowledge. Therefore, this theory describing and supporting the nurse-patient relationship can be applied to the relationship between new graduates and preceptors as new graduates transition into the workplace. It can be useful in suggesting a focus on performance anxiety and the best intrapersonal methods to manage that anxiety.

### *Theory Overview*

Introduced by psychiatrist Jacob Moreno, the American Freudian psychoanalyst Harry Stack Sullivan further developed the term "interpersonal relations". Peplau studied Sullivan's work and used it to explain the nurse-patient relationship as a therapeutic interaction. She described the nurse as the professional, with the expertise and knowledge of interventions that have been tested and found to be reliable (Peplau, 1992). Patients are sick or well persons, groups, families, or communities who are the recipient of nursing services (Forchuk, 1991). Peplau's study of Moreno and Sullivan led to her conceptualization of interpersonal relations, its interpersonal and intrapersonal focus, and its usefulness to nursing.



Relations are the identifiable bonds, linkages, and connection processes that occur within a relationship (Peplau, 1997). Relationships are any of these processes that occur between two or more persons (Forchuk, 1991). They are interactions in which two or more people participate, encouraging the relational process that occurs between them. Both people have their own experiences and perceptions, which consists of the thoughts, feelings, expectations, activities, and preconceptions of both parties. The interactions between these phenomena are at the core of the relationship (Gastmans, 1998; Peplau, 1952/1991).

The theory of interpersonal relations includes a series of four overlapping phases: orientation phase, identification phase, exploitation phase, and the resolution phase (Forchuk, 1993; Peplau 1952/1991). The orientation phase can last from minutes to months and is the time in which the nurse and the patient come to know and trust each other. The patient begins to recognize and understand the need for help and asks for help with meeting those needs. In the identification phase, the patient identifies opportunities for improvement and responds to those who can provide help. In moving to the exploitation phase, the patient uses the nurse as a resource and support to help with those improvements as well as recognizing other available resources. The resolution phase occurs when former dependencies no longer exist, identified goals are achieved, and ongoing interpersonal relations continue for further developmental change (Forchuk; Kim, 2003; Peplau). Communication between the nurse and the patient is both verbal and nonverbal and may include several different patterns. These patterns may complement each other. They may be mutual, antagonistic, or a mixture of any of these mentioned.

The intrapersonal foci are those processes that occur within the patient. Those processes that induce anxiety interfere with problem solving abilities, which impact learning, thinking, and the development of competencies required for the situation (Forchuk, 1993; Peplau, 1952/1991).

Based in the philosophy of realism, these processes exist by the manner in which they manifest themselves. They are multidimensional, context dependent, and can be studied using both qualitative and quantitative methods of inquiry (Fawcett, 2000).

### *Preceptor and New Graduate Relationship*

The phases of Peplau's theory of interpersonal relations are applicable to the relationship between preceptors and new graduates (Forchuck 2007, personal communication). During the orientation phase preceptors and new graduates come to know each other and learn how to work together as the new graduate recognizes the need for help with the transition. The identification phase is the time to discover opportunities for learning and improvement for the new graduate and to recognize the preceptor as a resource. During the exploitation phases, the new graduate uses the preceptor as a resource and support to help with those identified learning needs. When resolution occurs with the achievement of goals, mentoring can continue as the new graduate becomes more and more competent and continues the transition to professional nurse.

New graduates are dependent on the preceptor to assist with learning during transition just as the patient depends on the nurse. Patterns of communication between the preceptor and new graduate are very important. By virtue of the teacher and learner relationship and the need for nurturing, this communication is often therapeutic. The well-being and growth of new graduates are the foci of this professional relationship, and preceptors must come to know new graduates in the context of the orientation environment. This relationship, too, is multidimensional and can be studied using qualitative and quantitative methods.

There are many similarities between the nurse and patient relationship and that of the preceptor and new graduate. Both the nurse caring for the patient and the preceptor with the new graduate must be competent in their roles and be able to provide individualized structured plans

of care or orientation programs (Peplau, 1997; Pickens & Fargostein, 2006; Wright, 2002). The functions of the preceptor are comparable to those of the nurse including being a role model, teacher and support person, having a desire to teach, and having good communication and interpersonal skills (Chesnutt & Everhart, 2007; Everhart & Slate, 2004; Forchuk, 1991; Murphy, Petryshen, & Read, 2004; Peplau; Wright). Both the nurse and the preceptor have conferences to assess progress; manipulate the learning environment for the best outcomes; are part of an interactive, dynamic process; and can effect the relationship with their attitudes. The level of experience of the nurse or preceptor will also affect the relationship and the outcomes (Delaney, 2003; Duchscher, 2001; Floyd, 2003; Godinez et al., 1999; Peplau; Wright). Because preceptors can have such a major impact on new graduates, Peplau's theory helps to explain the nature of the preceptor and new graduate relationship and its effect on performance anxiety.

### *Anxiety*

Anxiety is an unexplainable uncomfortable feeling that is cognitively stimulated in an individual by any real or perceived internal or external threat to personal security, the body, or to the psychological self (Forchuk, 1991; O'Toole & Welt, 1989; Peplau, 1952/1991). Peplau describes anxiety as the energy coming from tension caused by biological and psychological needs that come to exist because of threats, real or imagined. This energy is also produced as the result of individuals' experiences of anxiety (Peplau, 1992). Anxiety can occur in mild, moderate, severe, and panic levels of severity (Peplau) and can be a circuitous process much like a physiological feedback mechanism.

The energy anxiety produces cannot be observed directly but is manifested as relief behaviors that the individual uses in an attempt to relieve the anxiety. These relief behaviors are usually dysfunctional and interpreted as anxiety when observed by others (Hrabe, 2005; Peplau,

1952/1991, 1992). Those observing and interpreting the behaviors can then develop appropriate interventions to help the individual reduce the anxiety.

The energy generated by performance anxiety can be transformative when the level is not extremely high. Transformative energy is that anxiety that can be channeled into effective coping mechanisms instead of dysfunctional relief behaviors (Jones, 1995) and used to achieve preset intrapersonal goals. Therefore, anxiety occurs intrapersonally but is communicated interpersonally (O'Toole & Welt, 1989).

### *Relief Behaviors*

Intrapersonal changes occur within the person as the result of interpersonal relations (Forchuk, 1993; Peplau, 1952/1991). As new graduates' transition progresses problems occur with the intrapersonal changes, and the transformation of excessive anxiety into energy required for learning and development does not happen (Kim, 2003). New graduates then display relief behaviors because of the discomfort caused by the performance anxiety (Peplau), and the preceptor observing the behaviors decides how to intervene. Relief behaviors follow five patterns of behavior: overt acting out, such as anger; covert acting out as in resentment; withdrawal; somatization; and learning (Peplau). Using the energy performance anxiety generates to motivate learning is what promotes the new graduate's successful transition. This display of relief behaviors and the interpersonal communication of performance anxiety follows Peplau's theory which is to first observe behavior exhibited, interpret the behavior, then allow the nature of the behavior to determine the intervention to be used (O'Toole & Welt, 1989).

Peplau identifies a variety of relief behaviors including denial, delusions, self-reflection, discussion with others, humor, aggression, hallucinations, and psychosomatic complaints (Forchuk, 1993; Peplau 1952/1991). Relief behaviors used by new graduates during their

transition period includes the presence of physical ailments, along with crying, acting out, nightmares, withdrawal, irritation, anger, and avoidance (Blainey, 1980). The most extreme performance anxiety relief behavior is when new graduates leave the nursing unit or leave nursing.

### *Confirmation of the Applicability of Peplau's Theory to the New Graduate Experience*

In order to test the fit between Peplau's theory and new graduate transition and to illustrate the existence of performance anxiety, the author examined both her own experience and that of the recent new graduate, Mary (name changed). Performance anxiety and relief behaviors occurred in the experiences of this author many years ago and in those of a recent new graduate. We both exhibited the psychological and physical manifestations of performance anxiety. My anxiety mirrored the intrapersonal process described by Peplau. Mary's was intrapersonal and affected by interpersonal relations also described by Peplau. We were both affected by the relations and relationships we had with our preceptors, with mine being more positive than Mary's experiences. Both of our experiences occurred during orientation to an intensive care unit (ICU), a setting with notable environmental stressors.

*My Experiences.* During my orientation, I experienced several occasions of performance anxiety, with the first occurring during my first night in the surgical intensive care unit (SICU). A cardiac surgery infant was coding and its chest had to be "cracked" open in the unit. I remember thinking to myself that I would never be able to do that; to run a code on any patient, much less an infant. That event played in my head for many shifts after it occurred.

I was helping to change linens of an adult cardiac surgical patient one night. My preceptor was holding the patient over and I was manipulating the dirty and clean sheets. I literally was moving all the lines, tubes, and wires one at a time; I was so afraid that I would

dislodge something vital in all that equipment that I could not bring myself to do what my preceptor finally did. She grabbed everything (very carefully, and safely, but with much more confidence) and said, “Will you just move this stuff?” I was horrified that she could be so “rough” with this life sustaining equipment, and although I was relatively certain that she was kidding, I just knew that she was going to tell me to not bother coming back the next night.

My anxiety level also skyrocketed as I neared the end of orientation and went to day shift where there would be lots more people of all disciplines, including physicians, watching me. At night, there was very limited contact with these others, but in the daytime, there were people everywhere. I not only had to call physicians on the phone, but now I had to talk with them face to face. Even dealing with residents was an anxiety-producing event. I did not want to appear “dumb” in their eyes and sometimes I would stutter and stumble when talking with them.

Another performance anxiety producing moment was adding a second patient to my assignment. Up until then, I had only had one patient at a time. While I waited for my second patient, the more I thought of how ignorant I would look to everyone else when I would not be able to manage both patients. Because of low census for several days, the actual event of caring for two patients took several shifts, prolonging the agony.

*My relief behaviors.* One manifestation of my performance anxiety was the nightmares I had for about 6 months after I began to work in the SICU. I was literally afraid to go to sleep because I knew that I would dream about what I had done during my shift. I remember getting up to go to the bathroom and realizing that I had not gotten out of the bed; that I was already out of bed. I then remembered that had been on the side of the bed “suctioning my patient” when I decided that I had to use the bathroom. Then I was horrified that I could just leave my patient, even though it was a dream.

Another memory was of spending 12 hours keeping up with a patient who had had bladder surgery and had orders for bladder irrigation to “keep urine pink”. Keeping up with a bladder irrigation that could not run dry because of the potential for clots to form in the bladder was next to impossible that day. The irrigation bag could not run dry, but in order for the irrigation to drain, the urinary bag had to be empty. Therefore, when I was not hanging the irrigation bag, I was emptying the urinary drainage bag. All of this while attending to the other needs of this patient and those of another patient. That night as I slept, I hung bladder irrigation bags and emptied urinary drainage bags all night in my sleep. I was thoroughly exhausted the next morning because I had “worked” all night, too.

*My relationship with preceptors.* My preceptors were supportive and encouraging in my learning how to care for these critically ill patients. They did demand excellence in my performance, but in a nurturing way. There was nothing punitive or demeaning, and constructive criticisms came with recommendations for improvement. The pressure I experienced with my performance was from an internal source; I was very concerned with the perceptions of my preceptors, the other nurses, and the physicians. I really did not think about how the patient or families thought of me. I knew I was more knowledgeable than they were, so they did not bother me. I thought that I should be able to fit in, be productive faster, and perform better than I perceived that I was doing. I never did reveal any of my thoughts or feelings to my preceptors because I thought they would form an even more negative perception of my capabilities. I just kept trying to prove myself to my peers, preceptors, and to myself. I eventually became one of the charge nurses in the SICU.

*Mary’s experiences.* During one night when she had been in orientation for about 6 weeks, the shift leader and her preceptor decided to pull her to another unit and to assign her two

patients with conditions that she had never cared for before because they wanted to “see what she does”. The patients were the same gender, were similar in age, and located in rooms next to each other. One was stable; the other was not. With all the care needed and being given and documented, the best help Mary’s preceptor gave was “do you realize that you didn’t give one of your meds?” Mary did not yet have access to the electronic medication administration system; therefore, she was dependent on her preceptor for medication administration times. The preceptor would have to tell her or print a paper record for Mary to follow. The preceptor chose not to do either one. She said that if it had been a medication more serious than Nexium, she would have told Mary about it.

After she was out of orientation and starting to feel somewhat more comfortable, she had a patient with a crushed pelvis who was going to surgery the next morning. He had not complained of any pain all night when he suddenly screamed in pain. Her preceptor happened to be working at the time, so Mary described the event up to that point. The preceptor looked at her, said, “You’ll figure it out”, and walked off. She obtained pain medicine for the patient who told her it was just a muscle spasm.

There was constant conversation in the unit about new graduates not being appropriate for employment in the unit, and that they should work elsewhere prior to transferring into the unit. These conversations around Mary were very discouraging to her, causing her to question her capabilities.

*Mary’s relief behaviors.* Mary was so terrified of working with her night shift preceptor that she would cry on the way to work. Before she left work the morning after the incident with the missed medication, Mary was in tears, terrified, and doubting her career choice. Her obvious distress at the time elicited no response from her preceptor.



Without a safe outlet, Mary “toughed it out”. She felt as if she were on stage, scrutinized, and judged unworthy to be in the unit. She would talk to her patients who could not talk back and think that others would “think I’m an idiot”, for talking aloud to those patients. She even had nightmares and scenarios that would run in her head while she was driving to work. One night, these thoughts even invoked dry heaves. Once she did call in sick because she was physically sick, on her hands and knees nauseous, and could not face going to work.

She is currently on dayshift and does not feel “stupid” asking questions although she has now been in the unit for about 18 months. She has more confidence in herself, and says that even at her lowest point, she did not ever think of transferring or quitting.

*Mary’s relationship with preceptors.* On a few nights, Mary got some relief when her regular preceptor was not working. On those occasions, she worked with a different staff nurse preceptor. This was a completely different experience; “she was nice and processed information in the same way as I did”. Mary began to feel as if she “wasn’t quite as dumb as I thought”.

Mary started out on day shift with a preceptor she describes as “very intelligent”. It was a “crash course” in nursing because they don’t teach you about being this kind of nurse in school”. Her preceptor was also a stickler for documentation and taught her more than nursing. Mary also felt as if she could ask questions and her preceptor would not think she was “dumb and stupid”.

Her move to night shift was a very different story. Her preceptor did not communicate well with her and was very rigid, military-like in her interactions with Mary. She did not teach; she told Mary what to do. They did not think or process information in the same manner, and Mary felt “like an idiot every night I worked with her, like why do you even show up; we do not need you.”

Mary observed several differences between day shift and night shift preceptors. The night shift is a younger group, acting like high school students at times. “They have cliques, and if they don’t like you, they will not answer your questions or help you.” The preceptors on day shift are primarily mothers and more mature. These experienced nurses were used to having all kinds of students around working and answering questions by lots of people. When she asked questions of those nurses, she stated, “I never feel stupid”. The day shift nurses give answers that are more thorough and then ask questions back to assess understanding. “I actually learned something”.

Mary also said that as the result of her experience, she put pressure on herself by telling herself “don’t screw up, don’t screw up.” She would just try to figure things out for herself rather than ask questions, placing even more pressure on herself. It was “like a cycle”, but she felt as if the night shift preceptor did more harm than Mary did to herself. Making it worse was that Mary did not have a safe place to unload her anxieties. The closest outlet was the alternate night shift preceptor who was just 1 year out of school herself. Even though that nurse would encourage Mary, she still felt as if she had to be careful what she said to her. Mary also prayed and talked to others at church that also encouraged her with positive statements that Mary knew but “couldn’t believe”.

Both experiences are examples of performance anxiety, one with intrapersonal origins, and the other with intrapersonal and interpersonal origins. The relationship between the preceptor and the new graduate, and several thinking errors, influenced both persons.

#### *Research Questions*

1. Does the level of performance anxiety experienced by new graduate nurses in an acute care setting change after an anxiety reducing intervention?

2. Does the level of performance anxiety experienced by new graduate nurses in an acute care setting change for the nurses in the control group?
3. Does the level of performance anxiety differ among new graduate nurses in an acute care setting after an anxiety reducing intervention as compared to a control group?
4. What is the effect of the preceptor/new-graduate relationship on performance anxiety in new graduate nurses who do and who do not experience an anxiety reducing intervention?
5. What is the effect of new graduates' perceived social support and performance anxiety in new graduate nurses who do and do not experience an anxiety reducing intervention?
6. Does the preceptor/new-graduate relationship influence performance anxiety more than perceived social support in new graduate nurses who do and do not experience an anxiety reducing intervention?

These research questions reflect the knowledge specifically sought from this study.

#### *Definitions of Terms*

A review of the literature determined the theoretical and operational definitions of these terms.

##### *Graduate Nurse*

Graduate nurses rely on rules to make patient care decisions. They do not have the clinical experience needed to interpret clinical findings and changing situations. They bring with them their nursing school education, which teaches nursing care, but not in the context of different and changing patient conditions ((Dreyfus & Dreyfus, 1986; Godinez et al., 1999).

Graduate nurses' goals are to complete tasks. They do not have the clinical expertise to put the pieces of the picture together for advanced planning or preventative interventions

(Chesnutt & Everhart, 2007). For the purposes of this study, a graduate nurse is defined as a nurse who has completed a program in an accredited school of nursing, is employed at a tertiary health care organization and a participant in the graduate nurse orientation program, and has had no previous professional nursing work experience (Goode & Williams, 2004; Kovner et al., 2007).

### *Preceptor*

A preceptor is an experienced nurse who serves the graduate nurse as a clinical teacher, supervisor, and role model during a specified time of orientation (Billay & Yonge, 2004). Preceptors guide new graduates' professional development (Nolan & Murphy, 2006), and facilitate and observe during their transition from student to professional nurse (Reddish & Kaplan, 2007). Because there may be more than one preceptor, for the purposes of this study, a preceptor is defined as a nursing professional who serves as the primary clinical teacher for a graduate nurse throughout the orientation period

### *Preceptor and New Graduate Relationship & Social Support*

The preceptor and new graduate relationship is the specific interpersonal relationship between the preceptor and new graduate. It is educational, and both are interested in successful development of new graduates (Forchuk, 1991). The relationship exists so that preceptors can provide support to graduate nurses as they attain cognitive, psychomotor, affective, and interpersonal skills necessary to provide safe, competent, and independent care of patients. The interaction between preceptors and graduate nurses will affect graduate nurses' development, and learning during orientation (Forchuk, 1993). A short-term occurrence, this relationship is a means of providing a one-on-one teaching learning relationship so that new graduates can adjust

to professional nursing (Billay & Yonge, 2004). The adapted Relationship Form measures the strength of this relationship.

Social support is that experienced with the existence of a relationship (Tsai, Tak, Moore, & Palencia, 2003; Weinert, 2007). The Personal Resource Questionnaire 85 measures perceived support found in the preceptor and new graduate relationship. The higher the score, the higher the perception of support (Spring, 2007).

#### *Performance Anxiety*

Performance anxiety is defined as a state of anxiety that only occurs in certain situations and is regarded as a reaction to a stimulus. It occurs in anyone who has the experience of being the focus of attention of a group of people. This is different from trait anxieties that represent general anxiety tendencies (Kirchner, 2003; Merrett, Richards, & Davis, 2001). It is a fear of being evaluated, embarrassed, or humiliated and a fear of interactions (American Nurses Credentialing Center, 2006; American Psychiatric Association, 2000; Connor et al., 1999). Performance anxiety is operationalized as the new graduate's score on the Clinical Experience Assessment Form. The higher the scores, the higher degree of performance anxiety present (Kleehammer, Hart, & Keck, 1990).

#### *Acute Care*

Acute care is defined as level of health care provided to patients with severe episodes of illness or conditions resulting from disease, trauma, or surgery. Acute care is usually provided in a hospital setting by clinical personnel using a variety of equipment, supplies, and techniques to provide diagnosis, care and treatment for a wide range of conditions (American Hospital Association, 2000). The acute care setting is operationalized as an inpatient hospital unit for patients requiring the defined level of care.

### *Cognitive Behavior Therapy*

Cognitive behavior therapy is an attempt to help individuals change the way they think about anxiety producing situations. Cognitive exercises are used to help them focus on changing their response to the situation because changing the actual situation may be beyond their control (Rodenbaugh & Chambless, 2004). The provision of actual therapeutic sessions is beyond the scope of this study. Therefore, education regarding thinking errors and strategies to combat those errors are provided.

### *Progressive Muscle Relaxation*

Progressive muscle relaxation therapy teaches individuals to recognize when their muscles are tense, then to relax those muscle groups. This promotes relaxation of the mind, thoughts, and emotions that may occur with anxiety producing situations (Conrad & Roth, 2007).

### *Reflective Journaling*

Reflective journaling is a tool used to help individuals develop critical thinking process and become aware of themselves and of how clinical decision making skills are used. Recording and evaluating thought processes also help with problem solving and self-efficacy (Kessler & Lund, 2004; Ullrich & Lutgendorf, 2002). Descriptions of thoughts and feelings become more organized and rational with the use of reflective journaling and this process decreases anxiety (Smith, Anderson-Hanley, Langrock, & Compas, 2005).

### *Summary*

During new graduate transition into the workplace, the preceptor model most often facilitates that transition (Billay & Yonge, 2004; Hyrkas & Shoemaker, 2007). Because of the interpersonal relations that form, and the constant evaluation required, this relationship has the potential to induce or reduce performance anxiety. The intrapersonal nature of performance

anxiety suggests intrapersonal interventions. Cognitive behavior strategies, progressive muscle relaxation exercises, and reflective journaling are intrapersonal interventions that this dissertation research proposes are helpful to new graduates to help themselves reduce performance anxiety.

This chapter has described the elements essential to the transition process of new graduates, including the critical role of clinical preceptor, and the factors contributing to performance anxiety during transition. Demonstration of the existence of performance anxiety and the applicability of the theoretical framework is evident in the abbreviated case studies and a review of Peplau's theory of interpersonal relations. The significance of the study is in the potential of the intervention to help ease the transition of graduate nurses to professional practice, and to promote retention in the profession.

## CHAPTER 2

### Literature Review

#### *Introduction*

This chapter reviews the theoretical and research literature concerning the relevant factors influencing new graduates' transition. This review begins with a discussion of research literature related to new graduates' transition into the workplace and the factors influencing that transition. It continues with an examination of anxiety as it relates to the theory of interpersonal relations, nursing students and test anxiety, new professional nurses and performance anxiety, and the influence of preceptors and new professional nurses' relationships on performance anxiety. Next is a review of Peplau's theory of interpersonal relations and its parallel to the relationship between new graduates and preceptors. The chapter will conclude with a discussion of selected intrapersonal performance anxiety reducing interventions that are congruent with Peplau's theory.

#### *New Graduate Transition*

Role transition is a change from one form to another along with a different way of functioning in the new form. Transition is also a source of performance anxiety and provokes relief behaviors for anxiety reduction. This role transition precipitates change within new graduates and in their relations with others (Beeber, 1998).

The transition from student to professional nurse is dependent on educational preparation, preceptorship, and the clinical environment (Amos, 2001). New graduates not having ever practiced nursing independently and having to adjust to the autonomy, responsibility, and accountability of the professional role will experience anxiety that affects performance (Allen,



1998; Amos). It is essential that employers and staff recognize the needs of the new graduate in order to facilitate the transition from student to professional nurse (Allen).

### *Educational Preparation*

In healthcare there is a gap between what nursing students learn in school and the nature of their first work experience, resulting in stress and anxiety in new graduates. This also results in inefficiency in patient care, turnover, and the very real possibility that the new graduate may leave nursing (Disch, 2001). Built on partnerships between academia and practice settings, nurse internships and residency programs have been developed to address this education gap and are designed to help new graduates develop additional knowledge and experience to provide care in the acute and critical care environments. Their contents are research-based, involving employers, new graduates, nursing school faculty, and the commitment to avoid reteaching undergraduate content (Goode & Williams, 2004; Harrison, Stewart, Ball, & Bratt, 2007; Newhouse et al., 2007; Roche et al., 2004; Rosenfeld, Smith, Iervolino, & Bowar-Ferres, 2004). Evaluation research on these programs have demonstrated reduction in turnover rates down to 12% where they have previously been as high as 35% to 50% (Williams, Goode, & Krsek, 2007).

Focus groups with structured and semistructured interviews have demonstrated that employers and new graduates believe that new graduates are inadequately prepared to work in the clinical area (De Bellis, Glover, & Longson, 2001; Delaney, 2003). New graduates say that they feel unprepared to fill the role of the professional nurse (Ellerton & Gregor, 2003). They are frustrated because existing staff and employers expect them to be able to take a full patient load right away (Gerrish, 2000; Goh & Watt, 2003). New graduates want acceptance as part of the team, but when they ask questions, they and the tenured nurses feel as if they should know the answers. They have learned disease processes but not how to apply that knowledge to the context

of the patient's condition (Duchscher, 2001; Godinez et al., 1999) and must ask questions to bridge the gap.

### *Preceptor and new graduate relationship*

The preceptor model is the most common method of facilitating transition for new graduates. This model should facilitate development of competence and confidence, acceptance, and retention in new graduates (Almada et al., 2004; Bumgarner & Biggerstaff, 2000; Fox, Henderson, & Malko-Nyhan, 2006). While there is no published research measuring the strength of this relationship, research does exist about the effects of the relationship. Preceptors can be a major impact on the successful transition of new graduates and should be carefully chosen based on their clinical competency, desire and ability to teach, and supportive attitude (Everhart & Slate, 2004; Oermann & Moffitt-Wolfe, 1997).

Roche et al. (2004) conducted research evaluating an orientation program in collaboration with a healthcare system. Sixty-seven new graduates and 23 experienced nurses needed orientation to their job roles. Surveys and group discussion results demonstrated that the most important factor in new graduates' satisfaction with orientation and with their job was the relationship with their preceptor and consistently having the same preceptor. They reported strong negative correlations between satisfaction with orientation and working with more than four preceptors. Contrary to Delaney (2003), these new graduates indicated that one to three preceptors gave them opportunity to work with more than one practice pattern.

New graduates in a phenomenological study investigating their transition experiences revealed that when they had positive relationships with their preceptors, both their thoughts and progression in orientation were positively affected. Less experienced or inconsistent preceptors led to negative thoughts, slower progression, and confusion and frustration for the new graduates

(Delaney, 2003). These results were supported in a qualitative study by Oermann and Moffitt-Wolfe (1997) and are consistent with Peplau's theory of interpersonal relations (Forchuk, 1991; Forchuk, 1993; Peplau, 1997). This theory states that being supportive and nurturing, a good communicator, as well as a good clinician lead to positive interpersonal relationships (Chesnutt & Everhart, 2007; Duchscher, 2001; Wright, 2002).

When new graduates in a British national study were asked about their expectations of preceptors, 97% indicated that they wanted to have a preceptor, with greater than 50% indicating they wanted one for at least 6 months. More than 90% of the new graduates indicated that their preceptors helped with confidence building and ease of transition, provided emotional support, and helped with learning and advisement on professional issues. These same graduates said that constructive feedback and teaching new clinical skills were very important to them (Hardyman & Hickey, 2001).

Results from studies conducted by Kramer (1974), Boyle, Popkess-Vawter, and Taunton (1996), Thomka (2001), and Farnell and Dawson (2005) concluded that preceptorship was necessary for both new nurses starting the first professional job and for nurses entering a new area of nursing. Their studies determined that new graduates needed to spend time with their preceptors to feel supported and to take advantage of the preceptor's knowledge and skills. They, too, concluded that working with multiple preceptors decreased the ability to build a relationship, which does affect the ability to attain competency. The theory of interpersonal relations also states that time spent in a therapeutic relationship helps individuals develop the competencies needed for personal development and problem solving (Forchuk, 1993)

Not all preceptor experiences are positive. New graduates described situations involving preceptors that were very stressful and anxiety producing. Their preceptors had poor attitudes,

probably because they did not have reduced workloads, which left little to no time for teaching. These new graduates had to find their support from sources other than their preceptors, and even resorted to reviewing class notes and texts to help themselves clinically (De Bellis & Glover, 2001). Duchscher (2001) conducted two in depth semistructured interviews with new graduate nurses and was concerned to find that there was no evidence supporting a positive relationship with their preceptors. The interviews revealed just one participant who referred to having a positive relationship with the preceptor.

#### *Clinical Environment and Social Support*

A supportive clinical environment is also important to the transition of new graduates as they learn a new role in a new environment. The new graduate literature concludes that the relationship between graduates and preceptors influences the learning environment (Oermann & Garvin, 2002), but there are other factors. These include acceptance by other nurses, patient assignments, and relationships with clinical managers (Casey et al., 2004; Reising, 2002). Even if they had clinicals in the same facility as a student, they are now looking at clinical life through new, professional eyes (personal communication, new graduate). The learning climate can enhance or inhibit learning as new graduates put their theoretical knowledge into practice (Almada et al., 2004; Amos, 2001; Way & MacNeil, 2006). If the environmental support is not present, transition will be negatively impacted as was revealed by 46 new graduates in a study by Oermann and Garvin. Those results demonstrated that communication and support by the preceptor and manager created a more positive environment for new graduates and made their learning easier.

The qualitative study conducted by De Bellis et al., (2001) identified the difficulties new graduates experienced in the clinical learning environment. Using semistructured interviews and

focus groups, the new graduates reported rudeness, unwelcoming atmosphere, preceptors' workload, personality clashes, lack of support, feeling stupid, and an overall stressful environment. They perceived that there was no time for thought and that the environment did not facilitate skill development.

### *Anxiety*

In this section, anxiety literature is examined as it relates to Peplau's theory of interpersonal relations, the link between test anxiety in students and performance anxiety in graduate nurses, and its application to the preceptor and new graduate relationship.

#### *Anxiety and the Theory of Interpersonal Relations*

A major concept of interpersonal relations theory, anxiety is a vague feeling of discomfort that is triggered cognitively in an individual by threats to security that are real or perceived, internal or external (Forchuck, 1991; Peplau, 1952/1991,). Anxiety induces feelings of inadequacy, fear of failure, and anticipatory loss of respect by others. These feelings produce psychological, cognitive, emotional, and physical responses to the threats to personal or psychological security (Edelman & Ficarelli, 2005; Meisenhelder, 1987; Sarason, 1984). Central to the theory is the premise that good interpersonal relationships and communication help to reduce anxiety (Feely, 1997).

Anxiety triggers occur when an individual has conscious or unconscious unmet expectations or when internal or external danger is anticipated (American Psychiatric Association, 2000; Reynolds, 1997; Edelman & Ficarelli, 2003). This anxiety produces energy leading to "relief behaviors" in response to a perceived threat or distress. Relief behaviors are those taken by an individual to relieve or prevent more anxiety (Forchuk, 1993; Kim, 2003; Peplau, 1992).

Individuals use patterns of relief behaviors when responding to anxiety producing situations. These behaviors are and attempt to identify the source of the anxiety and direct that energy towards lowering anxiety levels. If the anxiety is excessive and the variations of the behaviors do not resolve the anxiety, levels continue to increase to a panic level. At this point, the behaviors become automatic, occurring without thought or reflection. During this time, there is no learning, growth, or development occurring in the individual (Forchuk, 1993; Kim, 2003; Peplau, 1992). This is an undesirable state for new graduates as they endeavor to learn their new professional roles.

Although an intrapersonal concept, anxiety can be transmitted from one person to another interpersonally (Forchuk, 1993; Peplau, 1992). The functions and roles of preceptors are very comprehensive and demanding and include role model, socialization of new graduates, support person, clinically competent and knowledgeable, communicator, teacher, and evaluator. This requires preparation and adequate orientation to the preceptor role. A knowledgeable and expert clinician does not automatically mean that nurse will be a good preceptor (Billay & Yonge, 2004); therefore, interpersonal skills are important.

In light of the many roles, preceptors may be anxious about the responsibilities of precepting and can communicate this feeling to new graduate nurses who are already anxious about their clinical performance. The nature of the relationship should lead preceptors to monitor and manage their anxiety so as not to increase that of new graduates. Because of the influence of the relationship, preceptors should be knowledgeable and satisfied with their own clinical environment in order to be effective and not hinder learning and clinical performance of new graduates (Floyd, 2003).

## *Nursing Students and Test Anxiety*

Test anxiety refers to the conceptual, physiological, and behavioral responses that occur when there is concern about possible failure (Ludwig, 2004) and is a reaction to being evaluated in any situation (Oostdam & Meijer, 2003; Sarason, 1984) including clinical evaluation. It is a subset of anxiety related to academic education and may be the link to performance anxiety experienced in new professional roles (Stober & Pekrun, 2004). This anxiety interferes with the performance on tests, producing a state of fear or concern about that test performance. It interferes with academic success and has been studied since the early 20<sup>th</sup> century (Brewer, 2002; Mandler & Sarason, 1952; Sarason; Stober & Pekrun, 2004; Zeidner, 1995).

Research in the clinical area has demonstrated that nursing students experience test anxiety, seriously affecting learning, clinical performance, decision-making, and critical thinking (Blainey, 1980; Kim, 2003; Sprengel & Job, 2004; Suliman & Halabi, 2007) just as performance anxiety affects new graduate nurses. High levels of anxiety can interfere with learning and decrease performance on tests and during testing situations. This renders them less able to perform adequately during clinical assignments (Binding & Randall, 2004; Meisenhelder, 1987).

Test anxiety is described in two forms: cognitive interference and retrieval deficit (Edleman & Ficarelli, 2005; Kleijn, Van Der Ploeg, Topman, 1984; Meisenhelder, 1987; Musch & Broder, 1999). Cognitive interference involves freezing and blanking; the inability to recall the information. There is the possibility of misinterpretation of information, suggesting a performance deficit rather than a learning deficit, although neither situation is related to intelligence (Edleman & Ficarelli; Kleijn et al.; Meisenhelder; Musch & Broder).

Retrieval deficit occurs because of poor study habits and poor mastery of the material. The information can't be retrieved because it isn't there or hasn't been learned thoroughly

(Edleman & Ficarelli, 2005; Meisenhelder, 1987). Test anxiety is individualized in occurrence and severity and is most likely to happen when performing difficult tasks (Edleman & Ficarelli; Meisenhelder). The student knows the information but is unable to bring it to present memory.

In the process of reconciling classroom theory to student clinical practice, many nursing students experience high levels of anxiety (Kim, 2003; Oermann & Garvin, 2002). The difficulty in crossing the bridge between what is taught in the classroom and what is practiced in reality factors into the students' anxiety level. Some studies have found that there was greater anxiety experienced in the clinical area than in the classroom because the students were seen as being accountable and responsible nurses rather than as learners (Brown & Edelmann, 2000; Meisenhelder, 1987). As with test anxiety, fear of failure, being evaluated and observed, and having their competency questioned were some of the most anxiety producing situations in the clinical area (Brown & Edelmann; Meisenhelder; Timmins & Kaliszer, 2002) affecting their performance.

For nursing students in clinical situations test anxiety transforms to performance anxiety and presents a serious obstacle to successful clinical functioning. As the anxiety increases the ability to perform clinically under evaluative conditions decreases. This results in poor learning experiences and increases the possibility of failing the program (Brewer, 2002; Edleman & Ficarelli, 2005; Meisenhelder, 1987;). As anxiety increases, the students' focus becomes more and more narrow. Low levels of anxiety are useful to help students focus on the task at hand. But when performing clinically or on written exams, anxious students may become so focused on one aspect, that they do not have time to complete the exercise (Peplau, 1992). Anxious students are embarrassed in front of their peers when receiving low test scores and have negative reactions to being evaluated. They tend to lose concentration on the task at hand, which further



lowers performance and increases embarrassment. They may exhibit physical manifestations of anxiety such as muscular tension and headaches (Phillips, 1988).

### *New Professional Nurses and Performance Anxiety*

Performance anxiety in the workplace may be a residual of test anxiety experienced as a nursing student. Test anxiety appears in the literature under different names such as performance anxiety when referring to artists (Stober & Pekrun, 2004) with most of the literature focusing on musicians (Kirchner, 2003; Valentine, Meyer-Dinkgrafe, Acs, Wasley, 2006; Sonnenmoser, 2006). A subset of social phobia, performance anxiety is a fear of being evaluated, embarrassed, or humiliated and a fear of interactions (American Psychiatric Association, 2000; Connor et al., 1999; American Nurses Credentialing Center, 2006). This phobia may be experienced when a person is interacting in large groups or in small groups such as the workplace or with authority figures (Connor et al.) It is not pathologic unless it continually interferes with daily activities or occupational functioning (American Psychiatric Association).

Everhart and Slate (2004) and Reddish and Kaplan (2007) found that being responsible for the care of complex patients leaves new graduates feeling overwhelmed, exhausted, and suffering from performance anxiety. Duchscher (2001) determined that new graduates wanted to appear independent, removing the need for continuous observation and having to ask for help. These nurses' performances were also affected by anticipation of interactions with physicians as well as actual interactions. This was especially unnerving when working in an environment with uncooperative physicians, which contributed to more performance anxiety. She reported that completion of tasks on time and actual patient care activities were affected by being observed by preceptors and by other nurses.

### *Preceptor and New Graduate Relationship and Performance Anxiety*

Performance anxiety has internal and external origins, both of which are influenced by the relationship between the preceptor and the new graduate. External influences come from expectations placed on the new graduate from others or conditions in the environment. Internal influences are those expectations new graduates place on themselves to be as competent as the existing staff (Hinds & Harley, 2001; Reising, 2002). Studies have consistently shown that orientation with a nurturing, supportive preceptor decreases anxiety, increases learning, and increases the development of clinical competencies and confidence (Duchscher, 2001; Oerman & Moffitt-Wolfe, 1997).

Having multiple preceptors makes forming a relationship difficult. A phenomenological study by Delaney (2003) revealed that having many different preceptors resulted in confusion on everyone's part. New graduates were always having to start over with each different preceptor, having to prove themselves repeatedly, and feeling anxious about their performance and the perception of the preceptor. They felt stressed, anxious, and overwhelmed about performing procedures, talking with physicians, and appearing disorganized in managing a patient assignment.

As the theory of interpersonal relations is applied to this relationship and performance anxiety, the preceptor and new graduate enter into the orientation, identification, exploitation, and resolution phases of the theory. This relationship is the most common model used to continue the development of newly graduated student nurses into competent professional registered nurses. These new nurses will also have anxiety about being observed in the clinical area, meeting the demands of patient care, and being under constant evaluative scrutiny. Preceptors, other new nurses, existing staff, physicians, patients, and families provide this

scrutiny. In these situations, too, increased anxiety will delay growth, development, and learning (Casey et al., 2004; Chestnutt & Everhart, 2007; Godinez et al., 1999; Nolan & Murphy, 2006; Schoessler & Waldo, 2006a; Schoessler & Waldo, 2006b). Preceptors should be aware of their own anxieties and of their potentially anxiety producing behaviors and their effects on the new graduate (Forchuk, 1993; Kim, 2003; Peplau, 1992).

### *Theory of Interpersonal Relations*

The experiences of “Mary” and this author demonstrate that performance anxiety exists and is observable in new graduate nurses. This manifestation of performance anxiety is congruent with Peplau’s research methodology that focuses on developing nursing knowledge from clinical practice using both qualitative and quantitative methods. Although the majority of the clinical applications of the theory of interpersonal relations has been in the area of mental health, her theory is useful across clinical settings (Forchuk, 1993; Peden, 1998; Peplau, 1952/1991). Peplau’s methodology, practice-based theory development, consists of describing a phenomenon observed in the clinical area, developing interventions to affect the phenomenon, then developing a quantitative study to test the interventions (Peden).

This section of the literature review discusses research findings supporting the necessity of interpersonal relations to facilitate problem solving; the phases of the relationship; and the affect on anxiety on individuals and the relationship. It will conclude with the theory applied to the relationship between preceptors and new graduates.

### *Interpersonal Relations*

Multiple research studies have demonstrated that therapeutic relations between nurses and individuals do exist and can affect anxiety reduction in those individuals (Forchuk, 1994a; McNaughton, 2005; O’Toole & Welt, 1989). Using questioning, careful analysis of the

individual's words, and verbal exchanges, the existence of the relationship itself has been demonstrated to be therapeutic. In this relationship the nurse can help the individual use the energy of anxiety to address the challenges and perceived threats of the situation as well as problem solve (Beeber, Canuso, & Emory, 2004). Interpersonal relationships have been found to be associated with developing a sense of belonging and higher job satisfaction in new graduates, which is an influence on performance anxiety (Shermont & Krepcio, 2006).

Beeber (1996), Beeber and Caldwell (1996), Beeber and Charlie (1998), and Beeber et al. (2007) used narrative analysis of clinical interactions with patients to determine the presence of depressive symptoms and anxiety and as a screening method for offering interventions for recognizing and managing the anxiety. In these studies 63 women were exposed to the intervention of establishing therapeutic relationships to investigate their anxiety. Narrative analysis was used to identify changes in communication patterns and the effects of relationship-based strategies on the reduction of anxiety (Beeber & Caldwell; Beeber et al.). The Beck Depression Inventory, Describe Yourself inventory of self-esteem, and the Tilden Interpersonal Relationship Inventory were used to measure depression, self-esteem, and satisfaction in the interpersonal relationship. Results indicated that communication patterns did affect anxiety and that as the relationship developed anxiety-producing situations could be identified and managed before escalating out of control (Beeber & Caldwell; Beeber & Charlie).

Research results from McNaughton (2000, 2005) supported both the presence and importance of interpersonal relationships. In an integrated review of the literature and a qualitative study of data from audio recordings of home visits and field notes, the data showed that the relationship develops over time and that the longer a relationship exists the stronger the relationship and the more work accomplished. The amount of progress depends on the amount of

anxiety present; the more anxiety, the more work that occurs in the exploitation phase. It was determined that one-sided or difficult relationships are unproductive in solving problems. The key to mutual problem identification is building relationships and using appropriate behaviors to develop solutions to those problems.

### *Relationship Phases*

In two quantitative studies, Forchuk (1994b, 1995) determined that each nurse and patient relationship is unique and that if there is not a working relationship within 6 months, it is unlikely to develop. Results also indicated that relationships are different with different nurses, and that relationships with other persons affect the nurse's relationship with the patient (Poorman, Mastorovich, Malcan, & Webb, 2009). Contrary to McNaughton's study (2005) where anxiety was displayed during the orientation phase and helped move the relationship to the next phase, Forchuk (1994b) determined that anxiety was not significantly related to how much time was spent in the orientation phase. She concluded that anxiety might be less important than the theory of interpersonal relations suggests. Forchuk (1994a) also determined that preconceived notions influenced how long the orientation phase lasted and how long it took, if ever, for the relationship to reach the working phase as described by Peplau. Positive preconceptions moved the relationship towards the working phase, while negative preconceptions did not. It was also noted that the impression formed at the beginning of the relationship was the impression that lasted; there was no change over a 3-month period.

Forchuk et al.(1998) determined that the attitude of the individual nurse was one factor affecting the progress of the relationship to the working phase. The patient's perception of the nurse's attitudes has a strong effect on the nature and progress of the relationship. If the nurse

was unavailable or distant, progress was slowed if not halted. If the relationship progressed to the working phase, it was considered powerful and successful.

A literature review by Stockman (2005) concluded that the progress of the relationship is related to time spent together and that nurses with more experience had more positive relationships. She also found that nurses and individual patients who know each other for a long time prior to initiating the therapeutic relationship had a negative perception of the relationship.

#### *Theory Applied to Preceptors' Relationships with New Graduates*

There is only one study that has applied this theory to individuals other than patients. Kim (2003) used the theory of interpersonal relations to support research investigating anxiety-producing situations in baccalaureate nursing students (BSN) during their clinical experiences. Her sample included 61 generic and traditional BSN nursing students. Using the trait anxiety scale of the State Trait Anxiety Index and the Clinical Experience Assessment Form, she concluded that being late; being observed by instructors; fear of making mistakes; interpersonal relationships with physicians, preceptors, and staff; and feelings of inadequacy were the most anxiety producing situations. Results demonstrated that stressful clinical situations do produce anxiety in clinical practice that impairs performance and learning in clinical areas. New graduates have identified these same situations as anxiety producing and affecting performance (Gerrish, 2000; Kramer, 1974; Oermann & Garvin, 2002; Oermann & Moffitt-Wolfe, 1997)

#### *Performance Anxiety Reduction Interventions*

Elimination of all anxiety is not possible nor is it desirable, but it can be personally controlled (O'Toole & Welt, 1989). The literature discusses interventions available to manage performance anxiety, and this dissertation research focuses on the effects of selected performance anxiety interventions in new graduate nurses.

Acknowledging the presence of performance anxiety is the first intervention in the management and reduction of that anxiety. Then the goal is to identify those specific actions that will facilitate management and reduction. Because anxiety is an intrapersonal concept that is communicated interpersonally (Forchuk, 1993), interventions should therefore be directed towards encouraging individuals to take responsibility for their reaction to that anxiety and for its management (Allcorn & Diamond, 1991).

This section reviews literature discussing three intrapersonal interventions (relief behaviors) for the management and reduction of performance anxiety: cognitive behavior therapy, specifically cognitive restructuring, progressive muscle relaxation, and reflection in the form of reflective journaling.

Cognitive behavior therapy, progressive muscle relaxation, and reflective journaling have all been individually reported as being effective in relieving performance anxiety (Connor et al., 1999; Holahan, Richardson, Puckett, & Bell, 1979; Merrett et al., 2001; Poorman et al., 2009). A literature search determined that there have been no studies investigating the effects of the combination of these activities for that purpose. Except for reflective journaling, there were also no studies found investigating their individual or combination effects on practicing nurses of any type whether experienced or inexperienced.

### *Cognitive Behavior Therapy*

An intervention for test anxiety for over 30 years, cognitive behavior therapy is an attempt to change individuals' ways of thinking about situations. It has been found to significantly reduce absenteeism, improve mental health and motivation, and increase performance in the work environment (Hambrick, Weeks, Harb, & Heimberg, 2003; Keogh, Bond, & Flaxman, 2006).

Performance anxiety and some forms of social phobia are similar; therefore, interventions for social phobia are used for performance anxiety. These interventions focus on cognitive factors such as the beliefs and thoughts of the individual experiencing the anxiety and how they lead to behaviors that maintain or increase anxiety. During anxiety producing situations, either the individual has to change the situation or the emotions related to the situation. With cognitive behavior therapy, when situations produce distressful thoughts, individuals are taught how to change the way they think because they may not be able to change the situation (Rodenbaugh & Chambless, 2004).

There are several different components of cognitive behavior therapy. Exposure allows individuals to face situations until the anxiety decreases, test the reality of the disruptive thoughts, and take advantage of opportunities to practice the anxiety reduction skills (Heimberg & Becker, 2002). Another component is to help individuals identify and reduce use of behaviors that they erroneously believe will help them manage the anxiety. Attention focus modification helps them focus on the situations rather than the signs and symptoms of anxiety. Cognitive restructuring assists individuals to identify dysfunctional negative thoughts, evaluate their accuracy, and replace them with rational thoughts (Maron & Hermesh, 2003).

Peden (1998) interviewed six women to determine the nature of negative thoughts and anxiety. She then used a control group of eight and an experimental group of five persons in 6 weeks of group cognitive behavior therapy sessions and demonstrated a reduction in the negative thinking that can lead to anxiety. The first therapy session occurred during the orientation phase to develop the interpersonal relationship between the investigator and participants. This was done to increase trust and security and to decrease anxiety. Using the Beck Depression Inventory, the Automatic Thought Questionnaire, the Parental Bonding Instrument, and feedback



from the five experimental group participants, Peden concluded that although the sample size was small, the cognitive behavior therapy sessions were clinically significant in that they were effective in reducing negative thoughts.

A meta-analysis by Taylor (1996) determined that cognitive restructuring had a larger effect size on the experimental groups than the control groups, but that cognitive restructuring with exposure to the anxiety-producing situation produced the highest effect size. Being exposed to the anxiety-producing situation helped decrease the anxiety, but there was a greater effect when they also used the skill of identifying and replacing negative thoughts. This meta analysis supported cognitive behavior therapy for social phobia, which includes performance anxiety, and indicated that effects increased over time with follow up intervention. In a review article by Hambrick et al. (2003) they examined other meta analysis of social anxiety disorder using cognitive behavior therapy and concluded that the intervention is affective and lasting. In contrast, they also concluded that there is no definitive evidence that one variety of cognitive behavior therapy is more effective than others.

A meta analysis by Norton and Price (2007) included randomized clinical trials for adults with any anxiety disorder except social phobia. They concluded that there was sufficient evidence indicating that cognitive behavior therapy is effective in individuals with anxiety disorders; there was a larger effect size than no treatment or placebo; there was no difference in effects across the varieties of cognitive behavior therapy; and that cognitive behavior therapy and exposure appears to be the intervention that works most effectively.

#### *Progressive Muscle Relaxation and Music-assisted Progressive Muscle Relaxation*

Neuromuscular hypertension is a physical state produced by anxiety. The premise of progressive muscle relaxation is that if muscles are relaxed, the mind, thoughts, and emotions are

relaxed. Progressive muscle relaxation therapy teaches individuals to tense muscles groups in order to learn to recognize when they are tense, then to relax those same muscles groups (Conrad & Roth, 2007). With practice, individuals can learn to inhibit or control their anxiety by recognizing the triggers that produce anxiety. Individuals learn to focus on different muscle groups for tension and relaxation. Then, at the first sign of anxiety, the person can apply those relaxation skills (Conrad & Roth; Fedoroff & Taylor, 2001).

Music is well documented as an aid in the reduction of anxiety, has been studied in various populations (Hernandez-Ruiz, 2005; Rider, Floyd, & Kirkpatrick, 1985; Robb, 2000; Weber, 1996), and has been combined with progressive muscle relaxation in clinical practice (Robb). Music best suited for use with progressive muscle relaxation has a tempo below resting heart rate, fluid melodic movement, primarily low tones, a regular rhythm, and tones that include strings, flute, and piano (Richards, Nagel, Markie, Elwell, & Barone, 2003; Robb).

Sheu, Irvin, Huey-Shyan, and Mar (2003) report a reduction in heart rate and blood pressure in the experimental group after 30 minutes of progressive muscle relaxation. After 4 weeks of training, they reported significantly higher reduction in scores on the Perceived Stress Scale in the experimental group than in the control group.

Rankin, Gilner, Gfeller, and Katz (1993) studied 30 elderly persons randomly assigned to progressive muscle relaxation training or a control group to study the effects on anxiety reduction and memory. While no significant differences were found on difference in memory, the progressive muscle relaxation group did have significant reduction in anxiety. Holland et al. (1991) reported results from 147 cancer patients randomized to experimental and control groups testing progressive muscle relaxation versus a benzodiazepine for anxiety. After obtaining four

measures of anxiety, it was determined that while the benzodiazepine resulted in greater reduction of anxiety, the PMR also resulted in anxiety reduction.

Studies with dialysis patients (Yildirim & Fadiloglu, 2006) report decreased anxiety and increased quality of life after participating in progressive muscle relaxation and learning to cope with this life-altering event. Patients with nausea and vomiting postchemotherapy also benefited from progressive muscle relaxation. A pilot study by Malassiotis (2000) determined that progressive muscle relaxation helped to decrease the duration and lessen the intensity of nausea and vomiting in patients using progressive muscle relaxation. The difference was not statistically significant in the small sample but definitely clinically significant.

Progressive muscle relaxation has been beneficial to patients in cardiac rehabilitation (Wild & Turkoski, 2001). There was a significant reduction in anxiety in patients using progressive muscle relaxation along with standard rehabilitation over those undergoing just the standard rehabilitation.

Robb (2000) conducted a study with 66 college students comparing progressive muscle relaxation, music assisted progressive muscle relaxation, music listening, and silence as relaxation and anxiety reduction techniques. After randomization to treatment and control groups, ANOVA results revealed that each treatment was equally effective in significantly reducing anxiety and perceived relaxation. However, the greatest effect was found with music assisted progressive muscle relaxation as it made the relaxation experience more pleasurable. Responses to statements about the participants' experiences with the techniques were grouped into 10 categories, ranging from random and wandering thoughts, to sleep and wanting to sleep, to enjoy the exercises.

Weber (1996) reported the results of relaxation techniques that included music-assisted progressive muscle relaxation used with psychiatric inpatients. Thirty-nine patients' paired t-test of means revealed a significant reduction in anxiety after just one relaxation session. In contrast, Rider et al. (1985) found no significant difference between the control group that did not listen to music and the treatment group that did listen to music. Using 12 nurses who rotated shifts and 6 nurses who worked only night shift, this study collected physiological measurements including cortisol levels to determine differences in the levels of stress hormones between the two groups.

### *Reflective Journaling*

Reflective journaling is described in the literature as a successful teaching method and as a means of reflection to develop self-awareness in nurses. Reflection in the form of reflective journaling was found helpful in teaching critical thinking and critical reasoning to nursing students (Bilinski, 2002; Davies, 1995; Degazon, 1995; Schaefer & Curley, 2005). It was found to be useful in influencing those factors new graduates identified as inducing performance anxiety (Gerrish, 2000; Kramer, 1974; Oermann & Garvin, 2002; Oermann & Moffitt-Wolfe, 1997).

Students of all disciplines use reflective journaling to help make the connection between theory, research, and practice. It helps with communication, self-awareness, writing skills, and stress and anxiety reduction and is a mechanism to assess personal progress (Bilinski, 2002). Reflective journaling is also one method of improving critical thinking, decision-making, diagnostic reasoning, and development of new insights and perspectives. Improvements in these areas can lead to increased clinical competence and decreased performance anxiety (Kessler & Lund, 2004; Kielinen, 1997), which are some of the performance anxiety events identified by

new graduates as they transition to the role of professional nurse (Gerrish, 2000; Kramer, 1974; Oermann & Garvin, 2002; Oermann & Moffitt-Wolfe, 1997).

A study of nursing students was conducted using the grounded theory approach to determine reflective reflective journaling's effect on students as patient care providers and learners. Davies (1995) used unstructured interviews to gather data from six students enrolled in the 1st year of a nursing program. These students engaged in debriefing sessions and reflective reflective journaling throughout the semester. Towards the end of the study, they used reflective journaling to relieve some of their anxiety about the unknown, about learning in the clinical setting, and to share experiences. This sharing of experiences and reflective journaling helped them with identifying learning needs, to gain confidence in knowledge and skills, as a practice venue for collaboration, and to practice with clinical problem solving and understanding the reasons for interventions being used in clinical situations.

In studies with 6 advanced practice nursing students (Daroszewski, Kinser, & Lloyd, 2004) and 78 pharmacy students (Bouldin, Holmes, & Fortenbetty, 2006), on line reflective reflective journaling was found to help with those factors that influence performance anxiety. The results indicated that reflective reflective journaling helped them with communication skills, knowledge development, critical thinking, socialization, assertiveness, empathy, and sensitivity. They concluded that sharing journal entries was a positive influence on their professional development.

Kuiper (2004) conducted a study comparing the reflective journaling of 26 new and experienced nurses during a 9-week perioperative internship program. Using verbal protocol analysis as a technique for analyzing oral data, she determined that reflective journaling promoted learning in the nurse interns. The written words helped both the interns and their

preceptors see the changes in critical thinking and clinical reasoning and how those skills were used in learning their roles in the perioperative area. The journals helped the new nurse and the preceptor analyze and assess clinical performance, build self-confidence in new graduates, and gave them a freedom of expression that they may not otherwise feel that they possessed (Degazon & Lunney, 1995). Obtaining these skills and learnings are areas identified as performance anxiety producing in new graduate nurses.

### *Summary*

The relevant research and theoretical literature related to the theory of interpersonal relations, the intrapersonal concept of anxiety, and new graduates' transition into the workplace and the factors that influence that transition has been discussed in this section. The relationship between preceptors and new graduates and its affect on transition, along with the effect on performance anxiety and interventions to reduce that anxiety, have been explored.

The preceptors' relationship with new graduates is similar to the relationship between nurse and patient, with both being therapeutic in their own contexts. Studies have demonstrated that preceptors have some power and control over the clinical environment. This control has major implications on how new graduates progress during their transition and indirectly impacts new graduate turnover. Test anxiety is a common phenomenon in nursing students. Nursing students experiencing test anxiety may also experience performance anxiety as a new professional even to the extent that they do not perform well during their transition. Preceptors are in the best position to assess new graduates' performance anxiety and intervene.

Because negative relationships with preceptors may sometimes be a major factor in the degree of performance anxiety (Hinds & Harley, 2001; Reising, 2002), new graduates can also benefit from intrapersonal strategies to manage performance anxiety. In addition, studies

indicates that cognitive behavior therapy, progressive muscle relaxation, and reflective journaling can be effective in reducing performance anxiety. These interventions may have a positive effect on new graduates.

## CHAPTER 3

### Methods

#### *Introduction*

The purpose of this research is to verify and clarify the level of performance anxiety in new graduate nurses, and to evaluate the combined effectiveness of the provision of education about cognitive behavioral therapy concepts, progressive muscle relaxation, and reflective journaling as a program of anxiety reduction interventions for new graduates experiencing performance anxiety. In addition, the differences between the components of the intervention are examined. This chapter describes the protection of human subjects; identifies the research design; describes the sample, setting, data collection methods and tools; reports the application of the intervention and the plan for data analysis; and discusses limitations and delimitations of the study.

There are two intervening variables in this study; the preceptor and new graduate relationship and the perception of social support. According to the literature, these intervening variables do have an effect on transition of new graduates into professional practice. Therefore, this study also measures their presence and examines their effect on performance anxiety.

#### *Protection of Human Subjects*

This study was submitted to the East Tennessee State University's (ETSU) Institutional Review Board (IRB) for review prior to data collection. The review included the required approval by the administration of the healthcare organization. After approval, all new graduate nurses employed at a local tertiary health care organization during the period from June through December, 2009, and January through June, 2009, who met the study's inclusion criteria were invited to volunteer to participate in the study.



Risks to the participants were minimal and because of voluntary participation, all had the opportunity to withdraw at any time during the 12-month study period. All study data were kept confidential and will be revealed only as required by law or as directed by the IRB. No identifying information was collected ensuring confidentiality and privacy. Each participant randomly chose a numbered card from a basket, wrote his or her name on the card, and used that number on all measurement tools. The numbers on each tool enabled the matching of preintervention and postintervention measurements at the end of data collection. The nurse residency coordinator kept the cards in a secure location in the event that the participants forgot their numbers. The principal investigator (PI) and the dissertation committee are the only individuals with access to the data. All study results have been reported in aggregate form, and at the completion of the study the numbered cards were destroyed.

The PI introduced the study to the participants of the residency program indicating that the study would provide data for evaluating this intervention, and that the reflective journal entries would be analyzed in a future study. During this time, the participants gave informed consent to participate in the current study and to analyze the journal entries later. The journal entries are held in a securely locked cabinet in the PI's office as were the other data collected until analysis. The PI or other members of the research team were available at any time to answer any questions from the participants.

### *Identification of the Research Design*

#### *Description of the Sample and Setting*

This study was conducted at the flagship hospital of a 15-facility health care organization designated as a level one trauma center, located in the southeastern United States. The new graduates participating in the study were working in patient care areas in all facilities across the

organization. The facilities are located in two states and accept patients from 29 counties in four states. This flagship facility supports the clinical education of students from many disciplines, including nursing, medicine, pharmacy, respiratory therapy, and rehabilitation services as well as high school students training to become certified nursing assistants.

The organization implemented a revised graduate nurse orientation in 2007, which included a nurse residency program, to facilitate the transition from student to professional nurse. Therefore, experienced registered nurses new to the organization are not included in the residency program or the sample. These graduate nurse residents are employed in areas such as critical care, medical-surgical units, obstetrics, pediatrics, peri-operative services, skilled nursing, behavioral health, and emergency departments.

The nurse residency program is 6 months in length and is based on University Healthcare and American Association of Colleges of Nursing (UHC/AACN) collaborative nurse residency model for new graduates. Nurse residency programs may vary in length from 6 to 18 months and target new graduate nurses as they enter the professional work force. Some programs allow only baccalaureate graduates, while others, as does this organization's program, allow all new graduates regardless of educational preparation (Herdrich & Lindsay, 2006; Rosenfeld et al., 2004; Schoessler & Waldo, 2006a; Schoessler & Waldo, 2006b; Williams et al., 2007). The program used in this study is directed by a nurse residency coordinator who is a registered nurse prepared at the baccalaureate level. This residency program coordinator maintained the identity cards in a secure location until the end of the study period.

Using nonprobability purposive sampling, the PI approached two cohorts of new graduates participating in the nurse residency program with the opportunity to participate in this study; the first group as the control group, and 6 months later the second, as the experimental

group. Inclusion criteria included satisfactory completion of a registered nurse program at an accredited school of nursing; participation in the graduate nurse orientation program of this health care organization; and no previous work experience as a professional nurse.

The control group participants were asked to complete the measurement tools before and after their 6-month residency program sessions but did not receive the intervention. They completed the same preintervention and postintervention demographic data collection tools without the open-ended questions on the postintervention tool because that tool asked for data related to the intervention. They received verbal information about the study and the PI read the entire informed consent document to the group prior to their agreement to participate. Six months later using the same process, the PI approached the experimental group at the beginning of the residency program session to participate as the comparison group for this study. They, too, received information about the study and the PI read the entire informed consent document prior to their agreement to participate.

### *Research Design*

A quasi-experimental, nonequivalent comparison group, correlational, mixed methods design was used with three separate tools to measure variables of interest. A description of the sample was obtained using a demographic survey. The Clinical Experience Assessment Form measured levels of performance anxiety. The Relationship Form measured the aspects of the relationship between the new graduates and their preceptors, and the Personal Resources Questionnaire 85 measured the perception of support from preceptors. Preintervention data collection occurred at the beginning of the first session; postintervention data collection occurred at the end of the last session. The level of significance was set at  $p < .05$ , and a power analysis

determined a requirement of at least 40 participants per group to produce statistically significant results.

A mixed method approach allows for simultaneous quantitative and qualitative data collection and analyses to better understand the research problem (Cresswell, 2003). Therefore, qualitative data for this study were collected in the form of written answers to open-ended questions. Data collection also included reflective journal entries to be analyzed in a future study.

The interventions were applied during each of the six residency sessions. The treatment group received instructions regarding journaling after agreement to participate. Open-ended questions were included on the postintervention survey for the treatment group. Those choosing not to participate in the study did not complete the measurement tools but received the interventions because they were part of the residency program.

#### *Description of Data Collection Tools*

##### *Demographic Tool*

Demographic variables included age, gender, work area, and nursing education preparation. According to Merrett et al. (2001) and Kirchner (2003), performance anxiety is different from general anxiety. Because other life events may have been a factor in the presence of performance anxiety, a four point Likert scale was used to identify the presence of any existing general anxiety tendencies in their personal lives and control for its effect on performance anxiety related to their job responsibilities and was included in the demographic tool.

##### *Data Collection Tools*

Along with demographic information, this study used three measurement instruments with the permission of each author. The Relationship Form measured new graduates' perception

of the phase of their relationship with the preceptor. This tool is appropriate for this research study because the theoretical framework is based in Peplau's theory of interpersonal relations (Forchuk, 1991; Peplau, 1952/1991). The Clinical Experience Assessment Form measured performance anxiety in new graduates. Seven of the 16 items on this tool are interpersonal in nature, which is a component of the theoretical framework (Forchuk; Peplau). Because social support from preceptors is very important to successful transition of new graduates into professional nurses (Baggot et al., 2005; Billay & Yonge, 2004), the Personal Resource Questionnaire 85 (PRQ85) measured new graduates' perception of support from preceptors. A postintervention survey included four Likert scale statements and four open-ended questions about the intervention and the new graduates' perception of its usefulness (Table 1).

Table 1

*Measurement Tools and Variables*

<b>Measurement Tool</b>	<b>Variable</b>
<b>Demographic data collection</b>	Description of the group
<b>Relationship Form</b>	Perceived phase of preceptor and new graduate relationship
<b>Clinical Experience Assessment Form</b>	Performance Anxiety
<b>Personal Resource Questionnaire 85</b>	Perceived support from the preceptor
<b>Open ended questions</b>	Thoughts and feelings about the interventions and their effectiveness
<b>Postintervention survey</b>	Rating of interventions

New graduates were asked to keep a reflective journal, making entries at least once a week using Tanner's (2006) Clinical Judgment Model (Nielsen, Stragnell, & Jester, 2007). This format provides the structure for later analysis.

*Relationship Form.* The Relationship Form used for this study is an adaptation of a tool originally developed to measure the progress of the nurse-patient relationship. The tool is based on behaviors of the nurse and the patient in the relationship. The phases do overlap and as new problems and issues are identified, the relationship moves back and forth between phases. The four phases between orientation and resolution phase is measured on a seven point Likert scale, with mid points between each phase (Forchuk, 1994b; Forchuk & Brown, 1989). As time progresses either the nurse or the client can actually plot the perceived phase of the relationship (McNaughton, 2005).

The components of each phase of the nurse patient relationship were identified directly from Peplau's theory, providing construct and content validity. Three mental health clinical nurse specialists with theory-based practices evaluated the Relationship Form for content validity. Peplau herself stated that the form shows the progression of the relationship (Forchuk & Brown, 1989). Interrater reliability was found to be 91% between a nurse clinician and an independent psychiatric clinical nurse specialist reviewing 32 random charts of the nurse clinician's previous patients. Forty-one percent of the time, there was perfect agreement between the two nurse raters (Forchuk & Brown).

The form was adapted with the permission of Forchuk (personal communication, 12/10/2007), who as a content expert agreed that the relationship between new graduates and their preceptors was similar to that between nurses and their patients. The adaptations include changing "nurse" to "preceptor"; "client" to "preceptee"; "integrates illness" to "integrates new RN role"; "initiate rehab plan" to "initiate orientation plan"; "help plan for total needs" to "help plan for total orientation needs"; and "teach preventative measures and self care" to "assists preceptee to be self-directed". "Use work stimuli" was deleted for this context, as suggested by Forchuk. The adapted form was used to determine new graduates' perception of the phase of the relationship with their preceptors at the beginning of the program, and at the end of 6 months.

The new graduates were instructed to circle the behaviors that applied to themselves to determine their perception of their relationship with their preceptor in terms of the phases described by Peplau. They also circled those characteristics they perceived as pertaining to their preceptors. Based on the phase where the majority of the circles fell and using the Likert scale, a numerical score was assigned by the PI to reflect the perceived phase of the relationship (McNaughton, 2001). The points between the phases were used when the circles fell equally

across two phases (Forchuk & Brown, 1989). In the event that they had have more than one preceptor, the new graduates were asked to complete the form based on their main preceptor, or the one with whom they spent the most time. The number of preceptors was reported on the postintervention survey.

*Clinical Experience Assessment Form.* Kleehammer et al. (1990) developed the Clinical Experience Assessment Form to identify clinical experiences that induced performance anxiety in nursing students. It is a 16-item Likert scale that includes procedural and communication aspects of caring for patients, aspects of interpersonal relationships with other healthcare providers, and interactions with faculty while in the clinical area. The scale ranges from one (strongly disagree) to five (strongly agree), and scores greater than three on any one item indicated performance anxiety related to that item. Situations for the tool came from a review of the literature, student nurse interviews, and the experiences of one of its authors, ensuring content validity. Fear of making mistakes and observation and evaluation by faculty produced the most performance anxiety in nursing students, decreasing the quality of their performance in the clinical area. The higher the total score, the higher the level of performance anxiety, with the neutral point being a score of 48 points.

The Cronbach Alpha reliability coefficient for this tool was reported as  $r = .82$ . A factor analysis was used to determine construct validity, with a factor load of .30 considered to be sufficient. The items all loaded within acceptable limits onto one factor, with the highest loading factor being .68 and the lowest, .31. This range indicated that the assessment form did measure anxiety in this population (Kleehammer et al., 1990; Kim, 2003; Sprengel & Job, 2004). The tool was revised with permission to reflect the terminology of the environment of the new graduate in



this study, and included “preceptor” replacing “instructor”; “other nurses” replacing “faculty”; and “shift leader” replacing “team leader” (Keck, personal communication, 4/10/2007).

*Personal Resource Questionnaire 85.* The Personal Resource Questionnaire is a two-part measure of social support, the support gathered from the existence of a relationship. Based on the work of Robert Weiss, this tool is a synthesis of the following five relational concepts: indication of one’s worth or value; social integration as a integral member; provision for attachment or intimacy; experiencing nurturing behavior; and availability of informational, emotional, and material assistance (Tsai et al., 2003; Weinert, 2007). Part I describes personal resources that may be required in certain life situations, whether or not they have had any of those experiences in the past 6 months, and their satisfaction with the resources. Part II has a 25-item scale measuring the individual’s perceived level of support (Weinert, 1984). It is scored on a seven point Likert scale, with sums ranging from 25-175, and higher scores indicating higher levels of perceived support. Part I and part II are not dependent upon each other and can be used separately, depending on the research needs. Historically, only part II is used to when levels of perceived social support is the phenomenon of interest (Weinert,1987, 2007) and was the only part used for this research study. In the event that the subjects had more than one preceptor, they were asked to complete the tool with their main preceptor in mind or the one with whom they spent the most time.

Reliability of part II of the PRQ85 was estimated using internal consistency method. Using different studies with samples of different populations, the reliability ranges from .87 to .93. These populations include those 60 years and older, persons with arthritis, young adults 30-37 years of age, men and women together and separately, men and women as spouses, persons

with cancer, and pregnant women (Tsai et al., 2003; Weinert, 1987, 2007; Weinert & Brandt, 1987).

Construct validity was tested by correlating the PRQ85 with the Beck Depression Inventory, the Trait Anxiety Scale, and the Profile of Mood states, determining that perceived social support is different from anxiety and depression (Weinert, 1987). Wienert and Tilden (1990) used the Cost and Reciprocity Index as an accepted measure of social support, the Family APGAR, and the Spanier Dyadic Adjustment Scale as measurements of family well-being to help determine construct validity. The well-being measures demonstrated a strong positive effect of social support on family functioning and resulted in a moderate correlation with the PRQ85. These studies demonstrated that the PRQ85 does measure the perception of social support.

*Reflective Journaling.* The act of writing about emotional or bothersome experiences has been demonstrated to be beneficial to physical and psychological health (Smith et al., 2005; Tanner, 2006). Analysis of reflective writing helps nurses review their clinical performance for accuracy and appropriateness of clinical decisions. This helps to reduce both the performance anxiety that can occur in clinical practice and the anxiety related to the organization and environment, resulting in enhanced learning in a nonthreatening manner (Davies, 1995; Degazon & Lunney, 1995).

New graduates were asked to journal at least weekly about situations they identified as as causing them to be anxious about their clinical performance. The emphasis was on the act of journaling about these situations in order to reduce their performance anxiety. They were given the Guide for Reflection that uses the Tanner's (2006) Clinical Judgement Model (Nielsen et al., 2007) to provide a structured way of thinking about their practice. Written instructions included that the journals should include describing the situation, giving a brief background, interpreting

what they noticed, describing how they responded including their feelings during the situation, and offering their evaluation after the situation. Prior to each session, the nurse residency coordinator sent emails to the entire cohort reminding the study participants to bring their journal entries.

*Postintervention survey.* This survey included four Likert scale statements rating the participants' perceptions of the intervention.

1. I found the cognitive behavior sessions useful.
2. I found the progressive muscle relaxation exercises useful.
3. I found journaling useful.
4. The group interactions during the cognitive behavior therapy and progressive muscle relaxation sessions were useful to me.

This study also included open-ended questions to give the study participants the opportunity to explain their experiences in their own words, to express their thoughts about the interventions and the sessions.

1. What were your thoughts while engaging in the cognitive behavior therapy?
2. What were your thoughts while engaging in the progressive muscle relaxation
3. What were your thoughts while engaging in reflective journaling?
4. What is your overall evaluation of the usefulness of these sessions in reducing performance anxiety?

### *Interventions*

*Cognitive Behavior Therapy.* Education provided about the aspects of cognitive behavior therapy included automatic thoughts and disputing automatic thoughts, negative self-talk and countering negative self-talk, identification of thinking errors and developing rational responses,

and identification of mistaken belief and countering mistaken beliefs. These concepts were discussed in sessions two through five, along with techniques to combat negative thoughts. The sixth session provided a review of the concepts and the available strategies.

*Progressive Muscle Relaxation.* The new graduates were in an auditorium with quiet lighting and quiet music playing in the background and the door to the room closed to buffer any hallway noise. The exercises consisted of the LCSW delivering different scripts suggesting and guiding the relaxation of different muscles groups from head to toe.

*Reflective journaling.* The new graduates were asked to journal with a purpose, using the Clinical Judgment Model to reflect on performance anxiety producing events that occurred between sessions (Tanner, 2006). The Clinical Judgment model provided a way for the new graduates to organize the parts of the situation to help understand the factors that influenced nursing judgment and clinical reasoning and ultimately patient care. It was also a consistent method of collecting these data. The content of the Clinical Judgment Model included some of the factors that new graduates identify as causing performance anxiety (Nielsen et al., 2007). They found that organizing and reflecting on the situation might help reduce that anxiety.

#### *Application of the Anxiety Reducing Interventions*

Nurse residency sessions occurred on a monthly basis for each group, and included topics related to the concepts of professional development, research-based practice, communication, patient safety, clinical leadership, and integration into the organization's culture. Topical experts employed by or associated with the organization used several different teaching strategies to deliver the content. These included lecture, gaming, role-play, return demonstrations, and interactive application of the concepts.

The intervention sessions were included in the monthly nurse residency sessions for the treatment group, with each session lasting approximately 60 minutes at the end of the day. The first session included introductions and a short warm-up progressive muscle relaxation exercise, distribution of the journaling format and instructions, introduction of the cognitive behavior therapy concepts, and concluded with a progressive muscle relaxation exercise.

The remainder of the sessions consisted of teaching about several thinking errors as well as strategies for combating them, collection of the reflective journal entries, and a closing PMR exercise with time for questions (Table 2).

Table 2

*Interventions and Actions*

<b>Intervention</b>	<b>Action</b>
Cognitive behavior therapy	Restructure thinking; replace negative thoughts with positive thoughts
Progressive muscle relaxation	Recognize muscular tension as a symptom of increasing performance anxiety; practice relaxing tense muscles to relax thoughts and feelings
Reflective journaling	Placing thoughts on paper to examine their content in a structured and organized manner to be able to manage performance anxiety

The thinking errors and strategies included catastrophizing, all or nothing thinking, fortune telling, mind reading, emotional reasoning, over generalizing, labeling, making demands, mental filtering, disqualifying the positive, and personalizing (Table 3).

Table 3

*Thinking Errors and Strategies*

<b>Thinking error</b>	<b>Strategies to conquer</b>
1. Catastrophising	1. Put your thoughts into perspective 2. Consider less terrifying explanations 3. Weigh the evidence 4. Focus on what you can do to cope with the situation and the people or resources that can come to your aid
2. All or Nothing Thinking	1. Be realistic 2. Develop both or other reasoning skills
3. Fortune Telling	1. Test out your predictions 2. Be prepared to take risks 3. Understand that your past experiences don't determine your future experiences
4. Mind Reading	1. Generate some alternative reasons for what you see 2. Consider that your guesses may be wrong 3. Get more information

Table 3 (continued)

Thinking error	Strategies to conquer
5. Emotional Reasoning	<ol style="list-style-type: none"> <li>1. Take notice of your thoughts</li> <li>2. Ask yourself how you'd view the situation if you were feeling calmer</li> <li>3. Give yourself time to allow your feelings to subside</li> </ol>
6. Over generalizing	<ol style="list-style-type: none"> <li>1. Narrow your focus</li> </ol>
7. Labeling	<ol style="list-style-type: none"> <li>1. Allow for varying degrees</li> <li>2. Celebrate complexities</li> </ol>
8. Making Demands	<ol style="list-style-type: none"> <li>1. Pay attention to language</li> <li>2. Limit approval seeking</li> <li>3. Understand that the world doesn't play by your rules</li> <li>4. Retain your standards, ideals, and preferences, and ditch your rigid demands about how you, others, and the world 'have got to be'.</li> </ol>
9. Mental Filtering	<ol style="list-style-type: none"> <li>1. Examine your filters closely</li> <li>2. Gather evidence</li> </ol>
10. Disqualifying the Positive	<ol style="list-style-type: none"> <li>1. Become aware of your responses to positive data</li> <li>2. Practice accepting a compliment graciously with a simple thank you</li> </ol>



Table 3 (continued)

Thinking error	Strategies to conquer
11. Personalizing	<ol style="list-style-type: none"> <li data-bbox="873 306 1357 485">1. Imagine what else may have contributed to the outcome you're assuming responsibility for</li> <li data-bbox="873 527 1357 632">2. Consider why people may be responding to you in a certain way</li> </ol>

The participants were encouraged to practice these exercises between sessions.

Relaxation music of the type described in the literature was used for each progressive muscle relaxation segment.

During the last session, there was opportunity to review the interventions. This session also included the postintervention administration of the tools along with answering the open-ended questions.

The LCSW who consistently administered the interventions has 41 years of experience in working with groups, providing relaxation techniques, dealing with depression, managing stress, and actually providing cognitive behavioral therapy. The PI has had experience with reflective journaling personally and as a teaching and communication tool with nursing students and with RNs in clinical education classes.

#### *Data Analysis Plan*

The plan for quantitative data analysis included paired t-tests to determine the mean scores on the measurement tools and a mixed model ANOVA to determine any differences within and between groups. The effect of the intervening variables of preceptor and new graduate relationship and perceived preceptor support was analyzed using moderated regression

to determine if either had any interaction effect on performance anxiety. Descriptive statistics were used to analyze the four Likert scale statements, and Chi Square was used to describe the demographic differences between the groups.

Qualitative data analysis was completed using content analysis, a process used to understand, interpret, and conceptualize the implicit meanings of the words used to answer the open-ended questions (Macnee & McCabe, 2008). The PI, dissertation chair, and another graduate nursing student read and interpreted the content independently, then together came to consensus regarding the themes discovered from the answers. This established rigor and reliability for this qualitative technique.

### *Research Questions*

1. Does the level of performance anxiety experienced by new graduate nurses in an acute care setting change after an anxiety reducing intervention?
2. Does the level of performance anxiety experienced by new graduate nurses in an acute care setting change for the nurses in the control group?
3. Does the level of performance anxiety differ among new graduate nurses in an acute care setting after an anxiety reducing intervention as compared to a control group?

Mixed model Analysis of Variance (ANOVA) used to determine differences within groups and between the control and treatment groups.

4. What is the effect of the preceptor and new graduate relationship on performance anxiety in new graduate nurses who do and who do not experience an anxiety reducing intervention?
5. What is the effect of new graduates' perceived social support and performance anxiety in new graduate nurses who do and do not experience an anxiety reducing intervention?

6. Does the preceptor and new graduate relationship influence performance anxiety more than perceived social support in new graduate nurses who do and do not experience an anxiety reducing intervention?

Moderated regression was used to test for the interaction effects of social support and preceptor/new-graduate relationship in performance anxiety.

Content analysis was used to analyze the responses to the open-ended questions.

### *Parameters of the Study*

#### *Methodological Limitations*

Because of scheduling, the control group premeasurement tools and demographic data were not collected until the third of six sessions. This may have influenced the level of anxiety present at the time of this data collection. The progressive muscle relaxation exercises may have been compromised by environmental limitations that included uncontrolled noise in an adjacent room and the corridor. The participants were encouraged to practice the PMR exercises on their own, but the frequency and skill level related to this intervention was not measured; therefore, the effect is unknown. There was also a poor response to the request to submit journal entries; only one participant submitted two entries.

#### *Delimitations*

This study included all new RN graduates regardless of the level of educational preparation. The level may have altered the participants' motivation or perception of the value of the intervention.

### *Summary*

Protection of human subjects, the research design, descriptions of the sample and setting, data collection methods and tools, application of the intervention, data analysis plans, and

parameters of the study have been discussed in this section. The new graduates' anonymity and confidentiality was maintained throughout the study, with research numbers being used and all data being reported in aggregate form. This quasi-experimental, nonequivalent comparison group, correlational, mixed methods study was conducted over 12 months, using preintervention demographic information; three quantitative tools with adequate reported reliability and validity; and qualitative open-ended questions completed during the last session by the treatment group. Descriptive statistics were used to describe the sample, and a mixed model ANOVA was used to identify any within groups and between group differences. Moderated regression analysis was used to identify any influences of the variables on performance anxiety; and Chi Square was used to analyze the four-point Likert scale statements on the postintervention survey.

## CHAPTER 4

### Results

#### *Introduction*

This chapter contains descriptive statistics of the sample and statistical results related to each research question as well as the results of the postintervention survey. The research questions examine the effect of cognitive behavioral therapy, progressive muscle relaxation, and reflective journaling on performance anxiety of new graduates. Analysis of the open-ended questions provides additional data regarding participants' responses to the intervention.

According to the literature, social support and the relationship between the preceptor and the new graduate are intervening variables likely to affect the intervention's success. They are both factors influencing the transition of new graduates to professional nurse. These variables were measured and held constant to remove their influence on performance anxiety, thereby isolating the influence of the intervention.

The quantitative data were coded, input into the computer, and analyzed using the statistical package for social sciences (SPSS), GradPack version 17. The qualitative data from the open-ended questions were analyzed using content analysis. This chapter concludes with an analysis of the effects of the intervening variables on performance anxiety and subsequent post hoc findings

#### *Descriptive Statistics*

The study sample was comprised of 63 new graduate nurses; 42 in the control group from 110 eligible new graduates, and 21 in the treatment group, from 65 eligible new graduates. There were 25 new graduates in the control group who completed both the pretest and posttest; 9 from the treatment group completed both. Of that nine, two did not have preceptors at the beginning

session and were not able to complete the initial relationship form. Because of the predetermined need for at least 40 participants for each group, the study was underpowered from its initiation.

This sample ( $n=34$ ) was predominantly female (88.2%) between the ages of 20–29 (67.6%), and had been RNs for less than 3 months (70.6%). While the educational preparation was divided almost equally, most of them had an associate degree in nursing (53.3%), with this being their first degree (73.5%). Forty-seven percent of the participants were working at the flagship hospital in the organization, and 35.3% worked in medical surgical nursing units throughout the organization. “Very much” personal anxiety was experienced by 43.8% of the sample. Post study, 39.4% had one preceptor during orientation while 60.7% had two or more; 55.9% attended five of six sessions; and 38.2% experienced “very much” personal anxiety. Demographic characteristics of this sample are in Table 4.

Table 4

*Demographic Statistics (n=34)*

<b>Characteristics</b>	<b>FREQUENCY (%)</b>
<b>Age</b>	
20-29	23 (67.6)
30-39	5 (14.7)
40-49	4 (11.8)
50-59	2 (5.9)
<b>Gender</b>	
Male	4 (11.8)
Female	30 (88.2)
<b>How long an RN</b>	
0-3 months	24 (70.6)
4–6 months	10 (29.4)
<b>Educational preparation</b>	
ADN	16 (53.3)
BSN	14 (46.7)

Table 4 (continued)

<b>Characteristics</b>	<b>FREQUENCY (%)</b>
<b>Second degree</b>	
Yes	9 (26.5)
No	25 (73.5)
<b>Facility</b>	
Johnson City Medical Center	16 (47.1)
Sycamore Shoals Hospital	5 (14.7)
Indian Path Medical Center	4 (11.8)
Norton Community Hospital	4 (11.8)
Johnson City Specialty Hospital	2 (5.9)
North Side Hospital	1 (2.9)
Quillen Rehabilitation Hospital	1 (2.9)
Smyth County Community Hospital	1 (2.9)



Table 4 (continued)

<b>Characteristics</b>	<b>FREQUENCY (%)</b>
<b>Area of practice</b>	
Medical Surgical	12 (35.3)
Other	2 (23.5)
Adult Intensive Care	7 (20.6)
Emergency Department	2 (5.9)
Obstetrical Services	2 (5.9)
Pediatric Intensive Care	2 (5.9)
Perioperative	1 (2.9)
<b>How many preceptors did you have?</b>	
1	13 (39.4)
2	9 (27.3)
3	3 (9.1)
4	5 (15.2)
5	2 (6.1)
6	1 (3.0)
<b>How many residency sessions did you attend?</b>	
4	2 (5.9)
5	19 (55.9)
6	13 (38.2)

Table 4 (continued)

Characteristics	FREQUENCY (%)
<b>Level of personal anxiety</b>	
Very much	14 (43.8)
Somewhat	12 (37.5)
Not much	5 (15.6)
Extremely	1 (3.2)

There were statistical differences between the groups related to length of time as an RN ( $\chi^2 = 5.100$ ,  $df=1$ ,  $sig = .024$ ), educational preparation ( $\chi^2 = 8.571$ ,  $df = 1$ ,  $sig = .003$ ), and nursing being a second degree ( $\chi^2 = 10.161$ ,  $df = 1$ ,  $sig = .001$ ). There were no differences between the control and treatment groups related to age, gender, facility employed, level of anxiety related to their personal lives, number of residency sessions attended, number of preceptors, and area of practice.

#### *Research Questions*

Data obtained from 34 participants returning predata and postdata collection tools was used to address the research questions. The reliability coefficient for the PRQ85 for this study was  $r = .794$ . The reliability coefficient for the Clinical Experience Assessment Form was  $r = .838$ . Descriptive statistics of the study variables are summarized in Table 5.

Table 5

*Descriptive Statistics of the study variables (n=34)*

<b>VARIABLE &amp; MEASUREMENT</b>	<b>MEAN (SD)</b>	<b>Mixed model ANOVA F (df) sig</b>
<b>Performance anxiety</b>	<b>Control</b>	<b>Within groups difference</b>
<b>Clinical Experience Assessment</b>	Pre 45.80 (1.963)	16.775 (1) .001*
<b>form</b>	Post 39.12 (1.632)	
		<b>Preintervention</b>
		<b>Postintervention*Group effect</b>
	<b>Treatment</b>	.228 (1) .636
	Pre 47.56 (4.090)	
	Post 39.11 (4.046)	<b>Between group difference</b>
		.067 (1) .798
<b>Preceptor and new graduate</b>	<b>Control</b>	<b>Within groups difference</b>
<b>relationship</b>	Pre 3.88 (1.922)	.218 (1) .644
<b>Relationship Form</b>	Post 3.80 (1.658)	
		<b>Preintervention</b>
		<b>Postintervention*Group effect</b>
	<b>Treatment</b>	.416 (1) .524
	Pre 3.17 (.983)	
	Post 3.67 (1.033)	<b>Between group difference</b>
		.465 (1) .501

Table 5 (continued)

<b>VARIABLE &amp; MEASUREMENT</b>	<b>MEAN (SD)</b>	<b>Mixed model ANOVA <i>F</i> (<i>df</i>)sig</b>
<b>Perceived Social support</b>	<b>Control</b>	<b>Within groups difference</b>
<b>PRQ85</b>	Pre 114.40 (17.347)	4.613 (1) .040*
	Post 120.20 (11.944)	
		<b>Preintervention</b>
	<b>Treatment</b>	<b>Postintervention*Group effect</b>
	Pre 119.29 (10.111)	.543 (1) .467
	Post 31.14 (15.093)	
		<b>Between group difference</b>
		2.902 (1) .099

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\*p<.05

*Research Question #1*

Does the level of performance anxiety experienced by new graduate nurses in an acute care setting change after an anxiety reducing intervention? The effect size is 1.29; power, 0.92,

*Research Question #2*

Does the level of performance anxiety experienced by new graduate nurses in an acute care setting change for the nurses in the control group? The effect size is 0.65; power, 0.88.

*Research Question #3*

Does the level of performance anxiety differ among new graduate nurses in and acute care setting after an anxiety reducing intervention as compared to a control group? The effect size is 0.20; power, 0.08.

Analysis of the first three research questions was conducted using a mixed model ANOVA to determine the differences within each group and between the groups. There was significant reduction in performance anxiety from baseline to post survey in both groups ( $F = 16.775$ ,  $df = 1$ ,  $Sig = .001$ ). There was no significant interaction effect between the groups in the reduction of performance anxiety from baseline to postintervention ( $F = .067$ ,  $df = 1$ ,  $sig = .798$ ).

#### *Research Question #4*

What is the effect of the preceptor and new graduate relationship on performance anxiety in new graduate nurses who do and who do not experience an anxiety reducing intervention? The effect size is 0.066; power, 0.169.

#### *Research Question #5*

What is the effect of new graduates' perceived social support and performance anxiety in new graduate nurses who do and do not experience an anxiety reducing intervention? The effect size is 0.06; power is 0.156.

#### *Research Question #6*

Does the phase of the preceptor and new graduate relationship influence performance anxiety more than perceived social support in new graduate nurses who do and do not experience an anxiety reducing intervention? The effect size is 0.98; power, 0.173.

Analysis of the last three questions using moderated regression analysis determined that there was no significant interactive effect of social support on performance anxiety ( $F = 2.794$ ,  $df = 3$ ,  $sig = .057$ ) and no significant interaction effect of preceptor and new graduate relationship on performance anxiety ( $F = 1.142$ ,  $df = 3$ ,  $sig = .350$ ).

*Postintervention Survey*

The postintervention survey contained four Likert scale statements that allowed the participants to specifically rate the components of the anxiety reducing intervention (Table 6).

Table 6.

*Postintervention Survey (n=9)*

<b>Characteristics</b>	<b>FREQUENCY (%)</b>
<b>Level of personal anxiety</b>	
Not much	5 (23.8)
Very much	4 (19.0)
<b>I found the cognitive behavioral sessions useful</b>	
Not much	5 (55.6)
Some	2 (22.2)
Very much	1 (11.1)
Extremely	1 (11.1)
<b>I found the progressive muscle relaxation exercises useful</b>	
Not much	6 (28.6)
Some	1 (4.80)
Very much	1 (4.80)
Extremely	1 (4.80)

Table 6 (continued)

Characteristics	FREQUENCY (%)
<b>I found journaling useful</b>	
Not much	6 (28.6)
Some	3 (14.3)
<b>The group interactions during the CBT and PMR sessions were useful to me</b>	
Not much	3 (9.5)
Some	3 (14.3)
Very much	2 (9.5)
Extremely	1 (4.8)
<b>How many preceptors did you have?</b>	
1	2 (9.5)
2	3 (14.3)
3	1 (4.8)
4	2 (9.5)
5	1 (4.8)
<b>How many residency sessions did you attend?</b>	
5	3 (14.3)
6	6 (28.6)

Table 6 (continued)

Characteristics	FREQUENCY (%)
<b>Area of practice</b>	
Adult Intensive Care	2 (9.5)
Medical Surgical	2 (9.5)
Obstetrical services	1 (4.8)
Other	4 (19.0)

*Statement #1*

I found the cognitive behavioral sessions useful. Fifty-six percent of the treatment group sample replied “not much” to this statement.

*Statement #2*

I found the progressive muscle relaxation exercise useful. Sixty-seven percent of the treatment group sample replied “not much” to this statement.

*Statement #3*

I found the journaling useful. Sixty-seven percent of the treatment group sample replied “not much” to this statement.

*Statement #4*

The group interactions during the cognitive behavior therapy and progressive muscle relaxation sessions were useful to me. Thirty-eight percent of the treatment group sample replied “some” to this statement.

*Post Hoc Findings*

While there is no interactive effect on performance anxiety, these results also indicate a significant increase in social support within the groups ( $F = 4.613$ ,  $df = 1$ ,  $sig = .040$ ). Descriptive statistics of these study variables are found in Table 5 (page 86).



### *Open-Ended Questions*

Qualitative data from nine experimental group participants were used in the content analysis of the open-ended questions.

#### *Question #1*

What were your thoughts while engaging in the cognitive behavior therapy?

- a. It was hard to follow.*
- b. Waste of time*
- c. I thought it gave insightful looks into how you can build yourself up mentally and how we are destructive mentally. I believe that body and mind are connected and if one if one is not healthy, the other will not be either. These sessions helped reaffirm this belief.*
- d. Reinforced previous knowledge, beneficial information*
- e. I am very sleepy*
- f. How it is a nice idea, but in real life, when you are at work, you don't have the time to be able to just stop and "relax", It is nonstop from the moment I walk in the door.*
- g. How can this help me?*

#### *Question #2*

What were your thoughts while engaging in the progressive muscle relaxation exercises?

- a. Made me sleepy, somewhat relaxes*
- b. Yoga class is better at this. My time could be utilized better learning work related issues.*
- c. I really enjoyed them. They were very calming and I found that I could delve deep within and feel my body relax.*
- d. Concentration on task; progressive ability to relax more quickly; realizing I do not wish to relinquish control, even in this situation*
- e. I wish I were lying down and could sleep*
- f. How it is a nice idea, but in real life, when you are at work, you don't have the time to be able to just stop and "relax", It is nonstop from the moment I walk in the door*

### Question #3

What were your thoughts while engaging in reflective journaling?

- a. *Took too much time; I worked 40 hours a week*
- b. *Could have been useful but time intensive, Have I not spent all day charting?*
- c. *I did not like journaling and did not turn them in.*
- d. *Frustration, thought blocking, unwilling to commit deepest thoughts and fears to paper and then share them, even anonymously.*
- e. *What were the instructions? I should be clocked in to do this.*
- f. *I did not have the energy once I got home to sit down and journal.*

### Question #4

What is your overall evaluation of the usefulness of these sessions in reducing performance anxiety?

- a. *I love my job. I love nursing and providing patient care. My anxiety level is with the extra demands such as expectations to do corporate/company fluff. This “relaxation therapy” is along those lines. Let me do my job. The avenues for relaxation are good options but forcing them on everyone defeats the purpose.*
- b. *I don't know about performance anxiety during working hours, but afterward I felt like I could use these techniques more.*
- c. *Extremely useful, beneficial to practice and personal life*
- d. *These were skills I already had; a short reminder would have been enough*
- e. *I believe it helped, but was not as helpful as it could have been. My preceptor and co-workers really had a huge impact on decreasing my anxiety.*

### *Content Analysis of Open-Ended Questions*

There were 24 answers to five questions from nine participants completing the postintervention data collection tool. One answer had two parts, each counted separately, for 25 answers. Each answer was the unit of analysis, and because of the small number of units, the answers were considered as a whole.

After conferring together, the PI, dissertation chair, and graduate student came to consensus that the responses fell into four categories. They are no active engagement with the intervention,

rejection of the intervention, attention to the intervention, and active engagement with the intervention. The majority of the answers fell into the rejection of intervention category.

There were only two journal entries submitted by one participant in the treatment group. This participant did use the Guide for Reflection as requested, but these were too few for future analysis.

## CHAPTER 5

### Discussion

#### *Introduction*

The purpose of this study was to verify and clarify the level of performance anxiety in new graduate nurses and to evaluate the combined effectiveness of cognitive behavior therapy, progressive muscle relaxation, and reflective journaling in reducing performance anxiety in new graduate nurses. This chapter includes a discussion of the effect of the interventions on performance anxiety, differences between the components of the intervention, its usefulness to the nurse residency program, and revelations about the preceptor and new graduate relationship. This concluding chapter focuses on the major findings, proposes an interpretation, and suggests implications for nursing.

#### *Outcomes Related to this Research*

In this study, performance anxiety was verified as being present in new graduates, but below the level Kleehammer et al. (1990) called the neutral point. According to Jones (1995), an appropriate level of performance anxiety can be effective as a method of coping with the challenges of transition. With the scores of both the control and treatment groups below the neutral point on the preintervention survey, these participants have indicated that they were coping effectively with the transition to professional nursing practice.

Even though both groups were below the neutral point initially, they both also had decreased scores at the end of their respective residency sessions, indicating a further decrease in performance anxiety. For this to occur in the control group suggests that factors other than the intervention influenced performance anxiety. This observation is supported by a nonsignificant interaction effect between the groups regarding the level of decrease in performance anxiety.

The intervening variable of the preceptor and new graduate relationship was also examined. The results indicated that the relationship had no significant interaction effect on the reduction of performance anxiety, which may be related to the small sample size as evidenced by the low power. Having multiple preceptors may have also been a factor in the lack of effect of this intervening variable.

In reviewing the scores of both groups on the relationship forms, the control group scores actually decreased, while the treatment group scores increased. According to these results, neither group reached the exploitation phase where the preceptor and new graduate should work together to achieve the identified learning needs. This result could be one explanation as to why the relationship did not have more influence on performance anxiety.

The relationship scores centered around the identification phase in which learning opportunities are identified as well as the resources to achieve those learning needs. Peplau's theory states that the relationship moves back and forth along a continuum between phases (Peplau, 1992, 1997). Measurement of the control group could have occurred during a time when the majority were moving backward on the continuum. While neither group's changes in the relationship were statistically significant, the treatment group indicated a move forward on the continuum, clinical significance. Because of the movement along a continuum, this lack of significance does not indicate that the relationship was not important.

The new graduates' perception of social support from the preceptor increased for both groups, with a statistically significant difference within the groups. They may have perceived support from their preceptors while they were working together but not work together with any one preceptor enough to develop the relationship further.

Because there was no statistical difference between the groups related to number of preceptors, the perception of more support from the preceptor may have also occurred because the low performance anxiety may have enabled the new graduates to better internalize what the preceptors had to offer. An individual can better focus on what needs to be done when low levels of performance anxiety are present. Those with higher levels tend to lose concentration and cannot focus on the task at hand (Peplau, 1992).

If the new graduates had lower than expected performance anxiety initially, they may not have felt a need for the intervention as a mechanism to reduce performance anxiety that already existed at an appropriate level. Their level of performance anxiety could have been such that it was not overwhelming and was just enough to encourage learning rather than the use of relief behaviors as is consistent with Peplau's theory.

The lack of journaling may be related to lack of time and energy to devote to the task after working a stressful shift. Some participants demonstrated the "not much" ranking of this component of the intervention either by not journaling at all or by not submitting any journal entries.

The initially low performance anxiety scores may be reasons that neither intervening variable had a great effect on the reduction of performance anxiety and that the new graduates did not have an appreciation for the cognitive behavioral therapy education, progressive muscle exercises, and journaling. It is interesting to note that given the definition of social support, the scores for the treatment group increased even though the relationship did not progress. This could be attributed to the multiple preceptors being supporting and not being together long enough to develop the relationship to the exploitation phase.

### *Content Analysis of Open-ended Questions*

Common themes identified through content analysis of the answers to the open-ended questions from the study group were used to explain, support, or refute scores obtained with the measurement tools. In reviewing the units of analysis that supported the categories of no active engagement with the intervention, attention to the intervention, active engagement with the intervention, and rejection of the intervention, consensus was that the overall response was rejection of the intervention, which is in agreement with the quantitative findings. The following are a sample of statements supporting this determination:

- a. Waste of time
- b. I am very sleepy
- c. Took too much time; I worked 40 hours a week
- d. Could have been useful but time intensive, Have I not spent all day charting?
- e. I did not like journaling and did not turn them in.

Because the level of performance anxiety was below the neutral point at the beginning of the nurse residency sessions for both groups, those new graduates may not have felt the need for anxiety reducing interventions. The interventions may have seemed to be unnecessary because the need for anxiety reduction was not present. Another explanation is that the group did not have a full understanding of the purpose of the intervention; to be able to mediate personal responses to the environment since they cannot change the environment.

### *Findings Related to the Literature*

#### *The Sample*

The participants in this study have some demographic similarities and differences with national samples. The educational preparation in the sample for this research study is similar to

those first time candidates for the NCLEX in that the majority have the ADN (59%), with 37% having a BSN (Kenward, O'Neil, Eich, & White, 2008). Of the new graduates in this study, 53.3% have an ADN, and 46.7% have a BSN. This is also comparable with 2004 national RN statistics: ADN, 33.7%, BSN 31.7% (Health Resources and Services Administration, 2004).

This research sample is also similar to the national RN sample regarding gender. In the national sample 94.2% are female (Health Resources and Services Administration, 2004), and in this sample 88.2% are female. According to the 2004 RN statistics, 52.6% have an Associate Degree and 50.2% have a Bachelor of Science degree in another area prior to their nursing education. This sample is different in that only 26.5% are second-degree students.

Differences between the control and experimental groups related to educational preparation were significant. In this study, the treatment group was 100% BSN prepared and the control group was 33.3%, which is contrary to national RN statistics. This could be due to the small size of the treatment group and the availability of a large pool of BSN graduates in the immediate geographic region of the hospital system.

Sixty percent of the control group and 100% of the treatment group had been nurses less than 3 months. This significant difference is attributed to the control group completing the demographic survey during the third session, with more of them having already taken and passed the NCLEX. With the treatment group completing the demographics during the first session, all of them were either waiting to take the NCLEX or unaware of the results. This may have been a factor in the higher performance anxiety scores in the treatment group.

The significant difference between those being second-degree students could be due to the low number of study participants in the treatment group. Sixty seven percent of the treatment group had a second degree and only 12% of the control group had a second degree.



### *Research Questions*

With the decrease in performance anxiety in the treatment group, these findings are consistent with Holahan et al. (1979), Merrett et al. (2001), and Poorman et al. (2009), who all report that the components of the intervention are effective in reducing performance anxiety. Terms on the Clinical Experience Assessment form were changed to reflect professional nursing, but new graduates in this study sample may have identified with the statements on the tool simply because they were not far removed from being student nurses.

With only one new graduate submitting any journal entries, and not knowing if others journaled but did not submit the entries, it is difficult to evaluate whether or not journaling aided in transition. If some participants did journal but did not submit the entries, this may explain some of the decrease in performance anxiety which is consistent with research that determined the act of journaling is beneficial to the reduction of performance anxiety (Davies, 1995; Degazon & Lunney, 1995; Smith et al., 2005; Tanner, 2006), and journaling has been found to be effective with student nurses and practicing nurses (Gerrish, 2000; Kessler & Lund, 2004; Oermann & Garvin, 2002).

The differences in the decrease in performance anxiety between the control and treatment groups were not significant, and these findings are not consistent with past research regarding these anxiety reducing intervention where they have been found to be effective (Connor et al., 1999; Poorman et al., 2009). The small sample size in the treatment group may have contributed to the lack of significant findings in this study. Also, there was no literature discussing these interventions used in combination.

There was no evaluation of the new graduates' previous experience with journaling or the format used for journaling in this study. Those participating in this research may been required to

journal as a student and did not feel that same type of need for this study. The responses to the open-ended questions indicated that they may not have felt safe committing their thoughts to paper, even anonymously.

The lack of impact of the preceptor and new graduate relationship on performance anxiety may be partially due to the low level of anxiety initially, and is contrary to findings by Oerman and Moffitt-Wolfe (1997) and Everhart and Slate (2004). In addition, while 39.4% of the sample had only one preceptor, 60.7% had two or more preceptors, which may have affected the ability of the preceptor and new graduate relationship to develop meaningfully with any one preceptor. This conclusion is supported by Forchuk (1993) and research regarding the theory of interpersonal relations, which determined that the relationship requires time to develop in order to help influence, the new graduates' development. The data from this study support this because the relationships with these preceptors did not move beyond the identification phase. This is also consistent with Roche et al. (2004), who determined that satisfaction was decreased with new graduates when they had more than four preceptors.

While the relationship may not have advanced, possibly because of multiple preceptors, those preceptors were supportive according to the results of this study. This finding of an increased perception of social support is consistent with research by Reising (2002), and Casey et al., (2004) in that it is desired and needed. These authors determined that support by the preceptor, clinical manager, and other nurses create a more positive environment for new graduates. Without that support, a study by Oermann and Garvin (2002) determined that transition would have negative outcomes. The findings in this research indicate that while the perception of support did increase, it was not a factor in the decrease of performance anxiety, which is inconsistent with past research regarding support and relationships (Almada et al., 2004;

Fox et al., 2006) but does not indicate that the relationship was unimportant. In the literature, the relationship between the preceptor and the new graduate was found to be very influential in transition to professional practice as well as feeling supported by the preceptor and others in the clinical environment (Casey et al., 2004; De Bellis et al., 2001).

### *Conclusions*

#### *Existence of Performance Anxiety and evaluation of the intervention*

The two model cases of performance anxiety and the results of the Clinical Experience Assessment form indicate that performance anxiety exists in new graduate nurses. Results also demonstrate that the intervention was not effective in this group of new graduates in the reduction of performance anxiety, both of which fulfill the purpose of this research study. It is also evident that these new graduates had an appropriate level of performance anxiety during the period covered by the study and were able to cope with the challenges of transition with little outside intervention.

Similarities in the decrease of performance anxiety in both the control and treatment groups suggest the presence of factors other than the coping strategies supplied by the intervention and the effects of the intervening variables. Identifying those factors would increase the options available to new graduates to manage performance anxiety if high levels were present.

These results suggest that the relationship between the preceptor and the new graduate does have an effect on performance anxiety, but that social support from the preceptors do have an influence. This may demonstrate the necessity of maintaining one preceptor/new-graduate dyad during the entire orientation period.

A larger sample or even the participation of all invited from this population would have been more helpful in gaining a better understanding of performance anxiety and determining the effectiveness of the intervention. With the small number of participants and the incomplete data, making realistic and applicable decisions about the intervention's usefulness is difficult.

### *Modified Instruments*

The Relationship Form and the Clinical Experience Assessment Form were both modified with permission for use with this study population. These modifications may provide more tools to study performance anxiety in new graduates more thoroughly. The PRQ85 was appropriate for use as found in the literature.

The Relationship Form was originally developed to assess the nurse and patient relationship. Phrases were changed to reflect the work environment and the preceptor and new graduate relationship as suggested by the tool's author because both relationships are similar. The form was originally intended for the nurse, the patient, or both to plot the perception of phase of the relationship. In this study, new graduates plotted their perception of themselves and of their preceptor, and the PI only identified the phase of the relationship according to the seven point Likert scale where most of the circles items fell.

Because the tool was developed using the theory of interpersonal relations, it was appropriate to measure the strength and phase of the relationship after modification. The revised tool could be used as one method of evaluating the effectiveness of the frequently used preceptor model for new graduate transition.

The Clinical Experience Assessment form was developed for use by student nurses to identify anxiety due to communication issues and being observed. Students' experiences were obtained from pediatrics, obstetrics, community health, adult medical surgical, and mental health

patient populations. Students' performance anxiety was also increased by their perception of unsupportive faculty in the clinical area (Kleehammer et al., 1990). Anxiety about being observed in these situations reduced effective clinical performance, and both nursing students and new graduates identify these same situations as reducing overall clinical performance. Anxieties about performing in these particular situations identified by nursing students are the same situations identified by new graduates (Duchscher, 2001; Gerrish, 2000; Kramer, 1974; Oermann & Garvin, 2002; Oermann & Moffitt-Wolfe, 1997). With revisions to terminology used in some items, the Clinical Experience Assessment Form is appropriate for this study (Keck, personal communication, 4/10/2007).

With revision of some items to reflect the professional work environment, the Cronbach Alpha reliability coefficient was  $r = .838$ , which supports the modifications made for this study. This tool could be used to identify the level of performance anxiety in new graduates at hire, and could help determine if any intervention is needed for extremely high anxiety levels to avoid the negative impact on clinical performance.

The Cronbach Alpha reliability coefficient reported in the literature for the PRQ85 was between .87 and .93, and had not been used in new graduate nurses. The reliability coefficient for this study was  $r = .794$ , which is acceptable as an indication of how closely the responses to the different items are related to each other. This indicates that the tool will yield the same data consistently if the items stay the same (Macnee, 2004).

### *Strengths and Limitations*

Because there were no studies focusing on verifying performance anxiety in new graduate nurses, this study is the first to extend the understanding of the phenomenon to this population. The literature search resulted in studies related to musicians, actors, and sexual

performance, and the related issues of test anxiety in various populations of primarily nonnursing college students. With the need to facilitate transition for new graduate nurse, verifying the presence and the level of performance anxiety as well as an intervention to reduce its effect on transition to professional practice was important.

This study also evaluated the adaptation of existing tools for use in the new graduate nurse population; the Relationship Form and the Clinical Experience Assessment Form. These tools had existing reliability and validity, but having not been tested in this population, the use of these tools in this study adds existing means to measure phenomenon of interest related to graduate nurses.

Provision of the intervention by a LCSW with more than 40 years experience in this area was a great asset to this study. She was a consistent factor in the research project, and the PI did not have to familiarize herself with the techniques prior to using them with the new graduates.

The most influential limitation of this study is the small sample size and lack of power to find significant relationships. With only 21 participants remaining in the control group and 9 remaining in the treatment group, these findings cannot be generalized beyond this study. All new graduates in this organization are required to participate in the nurse residency program therefore there was no method in place to randomize the participants to determine if the residency program itself had an effect on performance anxiety.

The majority of the new graduates in this study had more than one preceptor, which may have been a factor in how they completed the measure for social support and the measure of the preceptor and new graduate relationship. For various reasons, not every new graduate attended every session and so did not experience all the performance anxiety-reducing sessions.

Because the intervention involved education about the concepts of CBT and not actual therapy, there was no method in place to assess whether or not the interventions led to changes in any negative thoughts. The postsurvey questions only ask about each component's usefulness, not about any actual practical use of the techniques.

During the progressive muscle relaxation exercises, there were extraneous noises that could not be avoided that could have influenced the level of relaxation able to be achieved. Overhead emergency pages, hallway noise, and moving furniture in adjacent rooms were also distracting during the exercises.

### *Implications for Nursing*

#### *Research*

Because of this study, there are many opportunities for future research. The Theory of Interpersonal Relations can be tested to determine if its extension to the preceptor and new graduate relationship is truly valid. Further exploration of the preceptor and new graduate relationship and its effect on performance anxiety maybe helpful information to use to appropriately match a preceptor with a new graduate.

More research conducted using the modified Clinical Experience Assessment Form with new graduates will facilitate validating its reliability coefficient with this population. This measure of performance anxiety could be used on initial employment to assess performance anxiety levels. With that information, the preceptor and nurse manager can use the interventions from this study or other interventions as a mechanism to reduce high levels of performance anxiety. Research about the level of performance anxiety will also alert others about it the phenomenon and its potential consequences for new graduates and healthcare organizations.

This study should also be replicated to be more inclusive of different racial and ethnic groups, at least in proportion to the national demographics. National and international samples would facilitate a more broad understanding of the concept in new graduate nurses.

### *Practice*

Being aware of the phenomenon of performance anxiety in new graduate nurses has the potential to enhance nurse residency programs. This awareness could serve to heighten awareness of preceptors, nurse managers, and tenured staff to its existence, enabling them to be better prepared to assist with its management if necessary. Knowledge of the concept could be incorporated into the program to help alleviate its effect on new graduates, and may generate more ideas regarding interventions to manage its effects.

New graduates themselves may gain a better understanding of the feelings and emotions they experience as they transition to the professional nurse role. Just knowing that the feelings and emotions are not unusual may help to alleviate performance anxiety and better prepare the new graduate for the initial experiences in the work environment.

### *Education*

These results can be used to educate nurses, new graduate nurses, managers, and administrators about the need to acknowledge the presence of performance anxiety in new graduate nurses. Discussions about performance anxiety would be useful as a tool to encourage participation in research so that meaningful data is obtained and disseminated for use in practice arenas. These results may also stimulate ideas about other viable methods to reduce performance anxiety.

Opportunities may be available to use reflective journaling as a teaching method outside of academia to help facilitate transition. It can also be a learning tool to aid in the development of



clinical and critical thinking in caring for patients. This intervention as well as others, together or individually, can be made available for new graduates to help themselves identify and alleviate performance anxiety.

### *Summary*

This dissertation research has identified and verified the presence of performance anxiety in a new population; new graduate nurses. Prior to this study, the most common use of the term performance anxiety was in the context of musicians, actors, and sexual performance. Well-known anxiety reducing methods that are commonly used individually were used in combination to reduce performance anxiety, which is also different from reported in the literature. This contributes to the body of nursing knowledge as well as fills a gap in that knowledge related to new graduates and the search for mechanisms to reduce their turnover in the workplace. More research needs to be conducted with larger sample sizes, different ages, cultures, and geographic locations to increase generalizability.

This study determined that performance anxiety is present in new graduate nurses, and suggests that interventions may be more effective if the level of that anxiety is high enough to interfere with clinical performance. Soliciting new graduate participation in research that directly involves them is also a mechanism that may encourage participation and use of research findings. While the literature supports the premise that the relationship between preceptors and new graduates is important to facilitate transition to professional practice, more work needs to be done to better clarify the effects of the relationship and the support required by the preceptor.

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VITA

GEORGITA LIAT TOLBERT WASHINGTON

Personal Data:     Date of Birth: October 15, 1958  
                          Place of Birth: Charleston, South Carolina  
                          Marital Status: Married

Education:         Parochial Schools, Charleston, South Carolina, 1976  
                          BSN, Clemson University, Clemson, South Carolina 1980  
                          MSN, Medical University of South Carolina, Charleston, South Carolina  
                          1987  
                          PhD, East Tennessee State University, Johnson City, Tennessee, 2009

Professional  
Experience         Staff nurse, Medical University of South Carolina, Charleston, South  
                          Carolina, 1980 - 1987  
                          Clinical Nurse Specialist, Wellmont - Holston Valley Medical Center,  
                          Kingsport, Tennessee, 1987 – 1999  
                          Clinical Nurse Specialist, Director of Nursing Education, Mountain States  
                          Health Alliance – Johnson City Medical Center, Johnson City, Tennessee  
                          1999 - present

- Publications: Broyles, G., Washington, G.T., Lowry, LW, Gugliotta, B., Eorgan, P., & Wilhoit, K. (2008). Registered nurses' perceptions of the work environment before and after adult intensive care unit renovations. *Dimensions of Critical Care Nursing, 27*, 180–188.
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- Washington, G.T. (2001). Family advocates: Caring for families in crisis. *Dimensions of Critical Care Nursing, 20*, 36–40.
- Washington, G.T. (1991). A climate for caring. In Birdsall, C. (Ed.). *Management Issues In Critical Care. (p21-37)*. St. Louis, MO: Mosby-Year Book.
- Washington, G.T. (1990). Trust: The critical element in critical care nursing. *Focus On Critical Care, 17*, 418-421.

Honors and Awards

1983 & 1986 Outstanding Young Woman of America

1987 Sigma Theta Tau, Gamma Omicron Chapter, Medical University of South Carolina

May 8, 2000, Certificate of Excellence – Chair, Research Council; Johnson City Medical Center

March 30, 2001, Honorarium 2001 for Women in Industry. Kingsport Altrusa, Altrusa, Inc.