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Transitioning From Graduate Nurse To Professional Nurse

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**TRANSITIONING FROM GRADUATE NURSE
TO PROFESSIONAL NURSE**

by

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Bachelor of Science, University of North Dakota, 1980
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A Dissertation

Submitted to the Graduate Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

**Grand Forks, North Dakota
December
2004**

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This dissertation, submitted by Jan M. Kamphuis in partial fulfillment of the requirements for the degree of Doctor of Philosophy from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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This dissertation meets the standards for appearance, conforms to the style and format requirements of the Graduate School of the University of North Dakota, and is hereby approved.

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PERMISSION

Title Transitioning From Graduate Nurse to Professional Nurse
Department Teaching and Learning
Degree Doctor of Philosophy

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Date 12-1-04

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ACKNOWLEDGEMENTS

After four years and 12 consecutive semesters of course work, one thing has become clear to me about this educational journey: you are never alone. I am deeply indebted to the Ph.D. cohort who fostered, guided, and cultivated my learning. They were my best teachers, mentors and friends.

I want to express my deepest thanks to Dr. Richard Landry for having the insight and fortitude to establish a doctoral program in Bismarck. His leadership and vision served as inspiration to all of us.

I want to thank my doctoral committee members – Dr. Richard Landry, Dr. Carla Hess, Dr. John Williams and Dr. Loretta Heuer, for taking on one more project. Their collective wisdom, professional guidance and support allowed me the opportunity to see my dream become a reality.

I am especially grateful to Shirley Hamann who introduced me to Outcomes Engineering and Dr. Barry Kibel's work. She helped track the residents and always made sure they filled out the tool.

I want to acknowledge Wanda, my secretary, for always being there to pick up after me and for keeping me organized and looking good. Special acknowledgement goes to my typist Sheila. She stayed with me through my thesis and signed up for a second tour of duty, never doubting there was an end in sight. Her patience, persistence and support are her most precious gifts. She has truly earned her stripes. Special thanks goes to my friend Marci who traveled with me on this journey, and never once deserted me. She was my editor, cheerleader, driver, critic, comic relief and cherished friend.

I am especially grateful for my wonderful and understanding family. For four years they gave up weekends and weeknights along with the kitchen table in order for me to succeed. My daughters Kelly and Kara always offered me encouragement and often studied beside me. Deep appreciation and affection go to my parents' who taught me the value of an education and were always proud of my accomplishments. And finally, my heartfelt thanks to my loving husband Mark, who continues to support me in all of my endeavors, no matter how large or small they may be.

ABSTRACT

Just as the world is facing many changes and transitions, nursing care delivery systems and nursing education systems continue to struggle with significant transitions in nursing practice. New, or novice nurses, find it increasingly difficult to transition from the role of the graduate nurse to professional nurse. It is, therefore, not surprising that the most stressful time during a nurse's career is the first three months of initial employment or that 35% to 60% of nurse graduates change jobs during the first year of employment. Many of these new nurses suffer from early disillusionment with the profession and often leave within 24 months. Understanding the relationship between the amount of time a graduate nurse is given to make the transition to a professional nurse is paramount to the success and retention of nurses.

The purpose of the study was to investigate whether six months was an adequate amount of time for new graduate nurses to transition into the role of a professional nurse. Data were collected from graduate nurses, (N=14) completing an Outcomes Engineering Tool, at three different intervals (one, four, and six months). The tool was used to measure graduate nurse mastery on 14-achievement indicators that focused on growth attainment. The 14-achievement indicators encompassed documenting, problem identification, evaluation of care, planning and prioritizing, decision making, delegating, collaborating, accountability, nursing theory, ethics, competence, leadership, career goals and organizational commitment.

Statistics measuring means, standard deviations, ANOVA and pairwise comparisons were used to determine the differences between the individuals within the group and the variance due to the difference between the groups. The study showed that after six months no graduate nurses had successfully mastered all the 14-achievement indicators. There were significant differences found between the first month and six month on all 14-achievement indicators; however, mastery was not achieved on all 14-achievement indicators during any of the three intervals. These findings indicate that the transition period for a new graduate to transition to a professional nurse is longer than six months.

CHAPTER 1

INTRODUCTION AND BACKGROUND

The relationship between nursing education and nursing practice has been the topic of discussion throughout the history of the profession. By their very nature, nursing practice and nursing education are symbiotically interdependent; neither can exist without the other (McNamara, 2000). However, the two could not be farther apart when it comes to performance expectations of the new graduate nurse (GN).

Every registered nurse (RN) enters the profession as a novice practitioner. Yet criticism exists toward contemporary tertiary nurse education in terms of its failure to adequately prepare nursing students with clinical skills required to cope with the “real world” of practice. Much of this criticism has been leveled at the gap between theory and practice, and education and service (Pigott, 2001). The “gap” between theory and practice of nursing is frequently premised on an “academic/hospital dichotomy” (Allmark, 1995; Upton, 1999). The primary factor that determines the gap between nursing education and service is a lack of understanding of the cultural differences between the two systems (McNamara, 2000). The academic setting is viewed as a teaching setting where students learn theoretical and professional systems of knowledge for lifelong learning in their occupation; the hospital setting is viewed as a practice or vocational setting in which theoretical learning should be applied with minimal for supervision and further training (Heslop, McIntyre, & Ives, 2001).

Differences in performance expectations between nurse educators and industry practitioners often reveal a lack of consensus as to what the new nurse can and cannot do, or should and should be able to do (Pigott, 2001). Most nursing programs purport that they prepare nurse generalists and support the fact that a graduate passing the National Council Licensure Examination for Registered Nurse (NCLEX-RN) only indicates that a novice nurse is a minimally safe practitioner. Service agencies sense that having just passed NCLEX-RN, a new graduate should be ready to practice independently after a short orientation period (Kells & Koerner, 2000). This perception that new graduates possess low levels of clinical competence has created tension among colleagues and employers with views that undergraduate education and the practice of registered nurses have become separate spheres (Pigott, 2001).

Schools of nursing have a responsibility to prepare graduates who can provide competent nursing care to meet the needs of clients in the healthcare system. Studies that have been completed on competencies of new nursing graduates found that new graduates may not be adequately prepared to practice in the changing healthcare environment (Diede, McNish, & Coose, 2000). Some new graduates suggest that they are not adequately prepared for what they are likely to encounter in the hospital setting (Pigott, 2000). Examination of nursing education reflects the profound changes that have occurred in the arena of graduate nurse preparedness.

Historically, nurses were trained in a service setting, and patient care was learned and delivered within the context of a single hospital (Godinez, Schweiger, Gruver, & Ryan, 1999). Student nurses were responsible for virtually all the care of patients in hospitals. In addition to classroom studies, students often worked more than 50 hours a

week providing direct care. Once the nurse graduated, there was no expectation of continued education or training (McNamara, 2000). As education moved from service settings to colleges and universities, student nurses were taught nursing care in a classroom setting and had clinical experiences in multiple sites and settings.

Today's education focuses primarily on nursing care and on the context in which that care is delivered. Hence, as today's graduates move from the educational environment to the service environment, they experience conflict associated with changing priorities and pressures. As the new graduates experience conflicting expectations, they experience the stress of reality shock (Godinez et al., 1999).

Kramer (1974) highlighted the reality shock experienced by neophyte graduate nurses in the United States of America when they found themselves in work situations for which they were inadequately prepared. Reality shock has been defined as "the shock-like reaction that occurs when an individual who has been reared and educated in that subculture of nursing that is promulgated by schools of nursing suddenly discovers that nursing as practiced in the world of work is not the same – it does not operate on the same principles" (Kramer, 1985, p. 291). Reality shock has been recognized in the practice professions and studies pertaining specifically to nursing have been conducted worldwide (Clare, Longson, Glover, Schubert & Hofmeyer, 1996; Kramer, 1974; Kramer & Schmalenberg, 1977). Adjustment to the role of the registered nurse, being left "in charge" and having responsibility for other staff, has been identified in a United Kingdom study (Lathlean, 1987) and criticized in a New Zealand study (Horsburgh, 1987). It would appear that these issues are still relevant to the nursing profession. While reality

shock is an acknowledged phenomenon in all practice disciplines and cannot be entirely eliminated, it can be mitigated (DeBellis, Longson, Glover & Hutton, 2001).

Mitigating this phenomenon calls for healthcare organizations to have an understanding of the transition process. The process of transition from graduate nurse to qualified nurse has long been recognized as a stressful experience (Gerrish, 2000). Inability to handle the pressure and resultant stress is reflected in turnover rates of new graduate nurses at 35% to 60% within the first year of employment (Coeling, 1990). A high turnover rate of nurses has substantial financial and emotional costs for the healthcare organization. A nurse with tenure of less than one year who terminates represents approximately the amount of the RN's annual salary and as much as \$100,000 in some cases (Beecroft, Kunzman & Krozek, 2001). Understanding a graduate nurse's perception of the process of transition to the professional role holds tremendous value for nursing organizations (Thomka, 2001). The transition period from graduate to registered nurse marks the beginning of the journey from novice to advanced beginner (Pigott, 2001). It is through this journey that organizations may gain great insight into the time it takes for a new nursing graduate to become oriented to the professional work environment.

One common way of addressing the transition from student to professional nurse is through formal orientation programs. These programs run routinely from six to ten weeks. However, it was found at the conclusion of many of these orientation programs, that new registered nurses were not yet comfortable with initiating physicians' orders, implementing new procedures, and in general moving ahead with confidence (Olson, et al., 2001). Some organizations identified three to four months of orientation as crucial,

whereas McCloskey and McCain (1987) suggested six months. In Australia, graduates indicated a minimum of three months before they felt competent and confident in their new role as a registered nurse (DeBellis et al., 2001). Nayak (1991) found that novice nurses continued to seek support from their nursing peers for an additional 14 months in their initial job experience, well past the initial six to ten week orientation period.

The literature substantiates that the university-work place transition is marked by differences between students' expectation of the graduate year and the realities of practice they encounter in the work force setting (Heslop et al., 2001). Further attention needs to be paid to bridging the period from a graduate nurse to the first six months of employment, in order to enable the neophyte nurse to acclimatize gradually to becoming an accountable practitioner (Gerrish, 2000). Allanach (1988) described a monitoring system to guide orientation of new nurses. This system enables nurses to be tracked over time by making apparent the learning needs of new nurses. According to Allanach (1988), the goal of transition was to achieve the outcomes of competence and confidence of the graduate nurse. Graduate nurse's gained competence by successfully progressing in their ability to use their skills to provide care for patients. During the early periods of transition, graduate nurse's learned how to behave, feel, and see their world in a new way.

Current literature addresses the need for a more collaborative effort between theory and practice on one hand and education and service on the other in order to minimize the difficulties new graduates encounter during the transition from university into the clinical setting. While the solution to this problem probably lies in collaboration between education and service, it is paramount to build these efforts around the

understanding that role transition takes time, practice and guidance (Godinez et al., 1999). This understanding could serve as a guide as professional educators strive to imbue nursing graduates with the professional values, attitudes and behaviors that are essential in achieving outcomes reflective of quality patient care.

Statement of the Problem

The transition from undergraduate nursing student to employment of a registered nurse is fraught with difficulties for a neophyte (DeBellis et al., 2001). Graduate nurses enter the job market with enthusiasm and high expectations. Adjusting to new hours, rules, and job responsibilities can be exciting; however, the graduate nurse soon finds these tasks more complex than anticipated. Some studies indicate that nursing graduates are not able to meet their employer's expectations to function effectively within their healthcare organization (Anders, Douglas, & Harrigan, 1995; Diede et al., 2000). The literature identifies graduate nurses being unprepared for the workload, time constraints, and the graduates' expectations of need for support from other staff (Clare et al., 1996; DeBellis et al., 2001; Horsburgh, 1987; Howie, 1987; McCloskey & McCain, 1987;). Typical responses of the new graduate to conflicts arising from student/work role transition include anxiety, fatigue, increased illness, and job dissatisfaction (Prescott, 1986). A gap develops between the new nurses' expectations and the realities of actual practice.

Failure of the graduate nurse to make the transition results in job dissatisfaction and high turnover rate within the first few months to a year of employment (Fisher & Connelly, 1989). High turnover of graduate nurse employees can have significant and

costly impact to an organization. To make this investment in manpower worthwhile, the graduate nurse must be retained beyond the first few months of employment.

The initial nursing experiences of new graduate nurses most often occur in the context of the clinical setting of a health service organization (Heslop et al., 2001). The experiences and performance of graduate nurses suggest that the workplace environment is as significant as the education preparation (Cruickshank, Mackay, Matsuno & Williams, 1994). Buckenham (1994) reports that nurses experience stress disillusionment and despair in the first year of employment and find organizational support provided to them as inappropriate. Hence, the health setting becomes critical, in that it affects the transition process that the graduate encounters. Depending upon the particular context, the hospital setting may enrich the transition process or, contrarily, diminish it (Heslop et al., 2001).

Early studies on the performance of new graduates demonstrate that they have a latent practice ability that can readily be transferred to the clinical environment, given a level of support and learning ability (Crowe, 1994; McKay, Brooke, & Bruni, 1981). Unfortunately, many healthcare organizations do not recognize this factor and continue to provide the traditional hospital orientation program for introducing graduate nurses into the work setting. These programs traditionally last six to ten weeks and serve as the basis for the transitional adaptation of the new graduate (Olson et al., 2001).

Traditionally, hospital orientation programs have primarily informed new nurses of legal, procedural and philosophical environment of the institution, often neglecting to provide ongoing feedback concerning acquisition of traits associated with the professional role (Hamilton, Murray, Lindholm, & Meyers, 1989). Fisher and Connelly

(1989) found that nurses who completed a basic orientation (8.2 weeks) did not feel competent in their professional role. Few hospitals have data to document the efficacy of orientation programs. Most orientation programs are consistently associated with new graduate turnover rates in excess of 50% (Hamilton et al., 1989).

Currently, high registered nurse vacancy rates have increased the pressure to orient and employ new graduates as soon as possible (Beecroft, et al., 2001). After completion of this orientation, they are expected to function in the role of professional nurse. This accelerated time frame has only added to the anxiety and frustration of an already overwhelmed graduate nurse.

This study was based on the premise that graduate nurses need more time (greater than six to ten weeks) to transition into the role of professional nurse. Brooks and Thomas (1997) in their research conclude that each organization must be perceptive to the time it takes to guide nurses in transition from “technical to the professional” and to prepare them for professional practice.

Purpose of the Study

The purpose of this study was to investigate whether six months was an adequate amount of time for new graduate nurses to transition into the role of a professional nurse.

Operational Definitions

RN: Registered Nurse. A nurse who has met both educational and licensure requirements to practice nursing as mandated by the state in which they practice.

GN: Graduate Nurse. A nurse who has graduated from an accredited nursing program and is licensed to practice as a registered nurse and is in their first year of employment.

Reality Shock: The shock-like reaction that occurs when an individual who has been reared and educated in that subculture of nursing that is promulgated by schools of nursing suddenly discovers that nursing as practiced in the world of work is not the same.

Neophyte: A novice beginner.

Transition Process: The period of learning an adjustment to the requirements of nursing in which the graduate acquires the skills, knowledge and values (additional to those learned during undergraduate study) required to become an effective member of the nursing work force.

Enculturation: A term used to describe cultural behavior, which is socially acquired, or how one acts in certain situations.

NCLEX-RN: National Council Licensure Examination for Registered Nurses. This is the national exam in which all registered nurses must take and pass in order to become licensed.

Mastery: Full command of some subject of study.

Research Questions

The following research questions were used to guide the study:

1. Is six months an adequate amount of time for new graduate nurses to transition to the role of professional nurse?
2. Were there significant differences over time on the three time measurements (one, four and six months) on the 14 achievement indicators by the graduate nurses?

Subquestions for question 2 were guided by the outcomes measurement tool used to address at what point in time (one, four and six months) does a graduate nurse master the ability to:

- 2a. Perform and document assessment independently
- 2b. Identify patient problems and potential complications using the guidelines of care
- 2c. Evaluate the effects of care provided to patients
- 2d. Plan and prioritize care for a group of assigned patients
- 2e. Make independent decisions about patient care issues
- 2f. Make assignments and delegate care
- 2g. Collaborate with physicians, and interdisciplinary care providers
- 2h. Assume responsibility and accountability for his/her practice
- 2i. Transfer nursing theory from my educational program to clinical practice
- 2j. Advocate for patients on legal and ethical aspects of care
- 2k. Demonstrate competence in providing quality, cost effective care
- 2l. Have been able to develop leadership skills
- 2m. Have formulated a plan for continued development of career goals
- 2n. Recognize the value of being part of a large health system and the opportunities it provides?

Source of Data

The main data collection tool for this study was the Outcome Engineering Instrument developed by Dr. Barry Kibel in 1999. This is an outcomes measurement tool that tracks graduate nurse progress toward professional role development. The Outcome Engineering Instrument was developed by the Pacific Institute for Research and Evaluation (Kibel, 1999). The instrument is an internet-based management and self-evaluation tool. The instrument is used on an on-going basis for journal keeping, bench

marking, progress tracking, real-time reporting, self-reflection, and cross-site learning.

The primary use of this tool is to track, document, and gauge self-transformation.

Assumptions

This study was undertaken with the following assumptions taken into consideration:

1. The characteristics of baccalaureate prepared graduate nurses (GNs) who participated in this research were representative of GNs throughout North Dakota. However, the GN's were not necessarily typical of the entire population of GNs in other nursing programs throughout the United States.
1. The GNs who participated in this research, graduated from accredited baccalaureate colleges of nursing throughout the state of North Dakota. Therefore, the GNs began their graduate nurse experience with comparable training.
2. The GNs answered the Outcomes Engineering Instrument to the best of their abilities and with honesty.

Delimitations of the Study

This study was delimited to:

1. Only a small available sample size ($N = 14$), with no male participants. There were no males that applied for the resident program.
2. The study was focused on selected indicators that related only to the amount of time needed to master selected achievements.

Limitations of the Study

The results of this study were limited by the fact that:

1. The focus of the study only addressed graduate nurses who accepted nursing positions at a single 236 bed medical facility in Western North Dakota.
2. The study focused on what occurred during a two-year period from 2002 and 2003. Implications for the future were discussed as they appeared appropriate, and suggestions for future studies were included.

Significance of the Study

Although there have been studies over the past decade regarding university to workplace transition, there are few that actually deal with the nursing profession. Literature documenting graduate nurses' perceptions and feelings regarding their orientation to the professional role is scarce (Thomka, 2001). As new members of the nursing profession, graduate nurses, in their transition to the professional role, have a variety of experiences. These experiences give rise to diverse thoughts and emotional responses that may have significant impact on a nurse's own professional development and socialization to the professional role. Therefore, there is a need to contribute to the literature on transitional experience of a graduate nurse, particularly regarding the amount of time needed for role transition to occur.

CHAPTER 2

REVIEW OF LITERATURE

Introduction

The first three months of employment as a graduate nurse have been identified as one of the most stressful times in a nurse's career (Dobbs, 1988; Fisher & Connelly, 1989). During the first year, 35%-60% of new graduates change their place of employment (Godinez et al., 1999; Hamilton et al., 1989). Coeling (1990) cited a report indicating 24% of new nursing graduates are seeking a different job 6 to 9 months after passing their professional licensure exam. This tremulous first year of employment following graduation has been observed nationally and internationally among nurses (Gerrish, 1990; Horsburgh, 1987; Lathlean, 1987). This phenomenon has been demonstrated in the United Kingdom (Hewison & Widman, 1996), the USA (Anders & Harrigan, 1995), Australia (Madger, McMillian, Sharkey, & Cadd, 1997), South Africa (Troskie, 1993), Canada (del Bueno, 1994) and New Zealand (Grew, 1994).

The earliest studies on transition from student to registered nurse were conducted in the United States and attempted to understand why new graduates left the workforce (Clare et al., 1996). Kramer's (1974) work on the transition process of newly graduated registered nurses described shock-like reactions to work situations for which they thought they were prepared. In the United Kingdom, nurses experienced strain caused by fear of being in charge and something going wrong in the first six months of employment (Lathlean, 1987). Australian studies by Pickhaver, Young, and Goldsworthy (1985) and

McArthur, Brooke, and Bruni, (1981) indicated that early graduates experienced features of reality shock such as, fatigue, disappointment, anger at their colleagues, loss of self esteem and pride in their work. In a review of South African graduates, Troskie (1993) found the early months of graduate employment as a period of upheaval and stress. Canadian nursing graduates showed similar patterns of adjustment difficulties (Hiscott, 1995). Horsburgh's (1987) study identified a period of upheaval and role confusion for the New Zealand graduates in their first four months of employment.

The nursing profession has socialized and enculturated its undergraduates poorly and as a practice-based profession, transitional issues have been well documented (Clare et al., 1996; Oechsle & Landry, 1987; Wilson & Startup, 1991). Empirical studies clearly indicate that new staff nurses should be given appropriate support to manage transition issues that arise early in their careers. If this does not occur the time and resources that are invested in induction, orientation, and preceptorship, not to mention initial training, will be wasted because there is evidence that these nurses will move on or leave the profession altogether (Dearmun, 1998).

This literature review explores these transitional issues from a number of perspectives including: reality shock (Kramer, 1974; Moorhouse, 1992,); transitional adaptation from the educational setting to the workplace (Kelly, 1996); socialization of the beginning professional nurse (Buckenham, 1994); implications of staff turnover (Munro, 1983); effectiveness of preceptored graduate nurses (Oermann & Moffitt-Wolf, 1997); and role transition (Godinez et al., 1999).

Reality Shock

The period of graduate nurse transition is characterized by rapid self-development, high anxiety, and reality shock (Greenwood, 2000; Godinez et al., 1999; Buckenham, 1994; Kramer, 1974). Reality shock has been expressed as “the phenomenon and specific shock-like reactions of new workers when they find themselves in a work situation for which they have spent several years preparing and for which they thought they were going to be prepared but suddenly find they are not” (Kramer, 1974, p. 4). Kramer (1974), in her seminal work, believed that “reality shock:” occurs on qualification. She observed that newly qualified nurses experienced high levels of stress, value conflict, and role uncertainty. Reality shock has been recognized in the practice professions and studies pertaining specifically to nursing have been conducted worldwide (Clare et al., 1996; Kramer, 1974; Kramer & Schmalenberg, 1977; McArthur et al., 1981; Pickhaver et al., 1985).

Reality shock is concerned with individual performance and affects the total person in relationships with and adjustment to the job and the environment in which it is performed (Castledine, 2002). In addition, the newcomer in the work situation is usually carefully weighed up, watched, tolerated, and expected to adjust to the expectations of those in key positions. In nursing, the new staff nurse will be assessed and judged by the nursing assistants, unit secretary, and other members of the interdisciplinary healthcare team (Kramer, 1974). The social climate on a ward is suggested to be the most potent contributing factor to “drop out syndrome” (Hipwell, 1989).

There has been much discussion over the past few years as to why newly qualified nurses find it difficult to adjust once they have finished their courses. In particular, it was

felt that the newly qualified nurse lacked some core practical competencies essential for helping the individual settle into the general nursing routine (Castledine, 2002). These core competencies are often obtained during the nurse's orientation period (Evans, 2001). However, with a push to move graduate nurses out into the work setting sooner, there seems to be little time to obtain these competencies. The average length of time for orientation was found to be eight weeks in many institutions across the United States (Winter-Collins & McDaneil, 2000). In a study by Thomka (2001), the description for orientation varied from four days to three months, with a most common time frame of six weeks. Many reported that the "reality shock" they experienced and the time devoted to orientation did not meet their needs and led to thoughts of leaving the profession (Thomka, 2001).

Studies within the work place have indicated that a flexible orientation that allows for more time can help cushion the "reality shock" experienced by new graduates (Fisher & Connelly, 1989). Kramer (1977) found that by providing a longer orientation period and additional support early in the graduate nurse's employment, one could ease the graduate nurse/work role transition and decrease the loss of these employees in their first year. Hollenfreund, Moore, and Jerson (1981) recommend that nursing-service administrators develop programs to help new nurses cope with reality shock in order to increase retention.

Transitional Adaptation from the Educational Settings to the Workplace

The transition from the educational setting to work setting is fraught with anxiety and insecurity (Brown, 1999). The complexities for transition into the workplace are numerous for the new graduate. Kelly (1996) suggests that newly qualified nurses are

caught in a war between two socializing forces – the academic world recently left behind and the world of clinical practice. New graduates report feelings of being overwhelmed (Brasler, 1993; Staab, Grannenman, & Page-Reahr, 1996). Some conclude their educational experiences left them unprepared to manage demands of their new role (Blaufuss, Maynard, & Schollars, 1992).

The graduates' level of clinical competency appears to be an area of concern for both the graduates (Alexander, 1991; Lay, 1990) and employers (Reid, 1994). Tensions are heightened by the employer's view that undergraduate education of the nurse and the practice of registered nurse are separate spheres (Clare et al., 1996). According to Alex and MacFarland (1992), the lack of dialogue between educators and employers results in graduates' preparation being incongruent with the needs of the workplace, and in employers placing unrealistic expectations upon the graduate. Many identified employers' expectations as unrealistic that the graduate employee will "hit the ground running", and perform as an experienced registered nurse (Reid, 1994).

Graduate nurses are beginning practioners and should be recognized as such according to the Queensland Nurses Union (2000) - Nursing Council's position paper on Transition Support Processes. There is an implicit assumption that the newly qualified nurse, unlike a graduate from any other profession, should be fully equipped to deal with every possible contingency from the first day of registration (Bradshaw, 1999). One would not expect a newly graduated solicitor to handle a murder trial or a newly graduated doctor to undertake a heart bypass operation. Other practice base professionals encounter comparable transitional issues (Clare et al., 1996). While there are similarities with other professions, few accept responsibility for life and death decisions and, as

Horsburgh (1987) points out, no other profession expects beginner practitioners to assume immediate responsibility for supervision of other staff. Medical Practice Acts require one year of internship followed by three to five years of residency training (Anders et al., 1995). But for some reason if new nursing graduates cannot hit the floor running and handle six to eight patients there is something wrong with them or the system that produced them.

Several Australian authors have been critical of employers' failure to recognize the graduate as a beginning practitioner (Moorhouse, 1992; Seigloff, & Walker, 1992), resulting in placement of graduates in positions they do not have skills or experience to manage. Perry (1988) found that New Zealand graduates were expected to carry a full registered nurse workload within two weeks of commencing. In a Canadian review, Hiscott (1995) identified similar patterns.

While graduates freely acknowledge their need to develop skills in their practice, they described an environment of "doing without thinking" (DeBellis et al., 2001). More than half of the nurses described themselves as overwhelmed by the volume and complexity of the work and frustrated with clinical situations for which they lacked knowledge and skills and the confidence to manage safely and independently (Ellerton & Gregor, 2003). Pigott (2001) found that some new graduates commented on the high level of expectations that were placed on them. Orientation to new hospital environments, becoming familiar with different equipment, policies, and hospital procedures, and the pressure of decision making left many of them feeling inadequately prepared for what they were likely to encounter.

Another important factor found in the literature of nursing competency is the discrepancy between what the graduate nurse expects and what they find later in their jobs as a registered nurse (Saleh, Lee, & Prien, 1965). Potential nurses have, in general, a much more idealized image of their eventual job than is later realized. A number of authors share the view that students are subjected to an unrealistic picture in the school of nursing which differs greatly from the reality on entering the hospitals (Yung, 1996; Gelling, 1992; Nyatanga, 1991; Becker, 1990). A recurring theme in the literature is that students should be prepared for the “real” rather than “ideal”; in clinical practice (Whitehead, 2001).

Employers voiced concerns that new graduates were deficient in clinical skills and judgment and had unrealistic expectations of the work environment (Hass, Deardorff, Klotz, & Baker, 2002). It is variously claimed, especially by nurses in the service sector, that new graduates have serious skills deficits in terms of numeracy (Brans, 1997; Cartwright, 1996), time management and prioritization (Anders et al., 1995; Brans, 1997; Reid, 1994), critical thinking skills (del Bueno, 1994) clinical skills (Madger et al., 1997; Reid, 1994) have poor reporting (charting) ability (Anders et al., 1995) and are unable to process medical orders appropriately and consult appropriately with other nurses and physicians (Anders et al., 1995). The Virginia Hospital Association (1992) survey of an 80 hospital nurse executives and 22 nursing school administrators showed most new graduates were unable to handle complete patient assignments. These agencies indicated critical thinking skills, problem solving skills, leadership skills, interdisciplinary team functioning skills, and conflict resolution skills were essential and yet the survey documents these skills lacking (Anders et al., 1995).

In 1993, a survey was conducted in 82 health care agencies within the state of Hawaii and all six schools of nursing. The survey revealed significant differences in the perceived competencies of new registered nurse graduates. When directors of nurses were asked if new graduates met expectations, more than 42% said no. Of particular concern was the fact that these directors felt that 28% of newly registered nurses could not chart observations in a meaningful way, 30% reportedly could not question and process medical orders appropriately, and close to 45% reportedly could not confer with colleagues and physicians (Anders et al., 1995).

Other studies have focused on types of competencies needed by new nursing graduates to function in the health care system. Deering-Flory and Neighbors (1991) surveyed 80 directors of nursing in hospitals on whether new graduates were meeting competencies identified by the National League for Nurses for entry level following six months of practice. Overall, the directors of nursing indicated that they believed that graduates were barely meeting competencies, with a mean score of 3.66 on 0-5 Likert scale.

Neighbors and Monahan (1997) surveyed home health agencies regarding their opinions of the level of proficiency needed by new graduates based on 82 identified skills. Only 24 of the essential skills identified by home health agency respondents were being taught by 100% of the programs. Of these skills, 73 were noted by more than 90% of the respondents as procedures of which the new graduate should know for home health nursing.

A survey conducted in Oklahoma (Diede et al., 2000) determined performance expectations of new graduates within the first six months of employment, based upon

employer's perspectives. The results indicated that employers highly valued communication skills, competency in technical skills, as well as accountability to the agency by which they were employed. Critical thinking skills and skills related to delegation and supervision were also viewed as important.

The challenge for educators is to prepare graduate nurses for practice and to ensure their competency. Academic instructors have frequently been criticized for preparing graduates who are not capable of managing groups of patients with complex problems (Anders et al., 1995). On the other hand, educators complain that agencies do not seem to appreciate the complexities of educating professional nurses, given the limited time students have to master the curriculum in a wide variety of practice settings (Anders et al., 1995). One such solution may be allowing the new graduate sufficient amounts of time to orient to their new role. The Virginia Hospital Association (1992) respondents indicated that, as a result of the deficiencies found in the afore-mentioned study, that new graduates need orientation, of three to six months before they function independently.

Socialization of the Beginning Professional Nurse

In order to function optimally, new nursing graduates need to be socialized into their professional role (Beeman, Jernigan, & Hensely 1999). Socialization is the process of moving from one social role to another by gaining knowledge, skill, and behaviors necessary to participate in a group (Saarman, Freitas, Rapps, & Riegel, 1992). Brim (1996) defined socialization as "the process by which persons acquire the knowledge skills and dispositions that make them more or less able members of society" (p. 50). Bullis (1993) described socialization as a process through which individual-societal

relationships are mediated, specifically the process through which newcomers become organizational members.

Role socialization is one way of understanding the process by which individuals learn and internalize what is expected of them in particular situations (Brown, 1999). Socialization includes learning the norms and expectations of the professional group and those of the workplace. Nurses who graduate from a nursing program enter the workforce and develop a career undergo socialization as they become insiders in the hospital (Tradewell, 1996).

According to Davis (1968), professional socialization of student nurses was documented in the literature as early as 1958. Davis described the socialization process as the period when the students lay culture and the nursing professional role interact. Students begin exchanging their own values for those of the nursing profession. Once the students adopt the characteristics of the profession, they develop commitment to the profession (Tradewell, 1996).

Kerfoot (1991) stated that nurses have their own language, rules, and ways of thinking unique to their organization. It is important that the new nurse learn this language through socialization. If the rules, values, and ways of thinking match those of the graduate, a partnership is formed that leads to higher levels of productivity and retention. If not, then turnover, low productivity, and poor quality of care is the outcome (Kerfoot, 1991).

New nursing graduates surveyed by Mooney, Diver, and Schnackel (1988) reported a need for feelings of comfort and belonging. New graduates indicated that they do not fit in, lack acceptance from their colleagues, and doubt their ability to acquire the

required skills (Tradewell, 1996). Nursing educators who recognize and incorporate socialization theory into graduate nurse orientation increase the opportunity for the new nurse to fit in. The new graduate's perceptions of acceptance by fellow staff members lay the foundation for commitment to the organization and a desire to be a part of it, thereby promoting retention (Dunnette & Hough, 1990).

Toffler (1981) determined in a study of role socialization that the first year of an occupational role seemed to be critical in determine job and career decisions of an individual. Nurse administrators who understand this concept and favor an extended orientation period for the graduate nurse can realize cost savings. By retaining the new graduate at a productive, competent level, the organization can decrease the turnover rate and realize a significant long-term cost savings over traditional orientation programs (Beeman et al., 1999). Hospitals should establish a climate that will facilitate a new-comer's socialization (Tradewell, 1996).

Implications of Staff Turnover

The recruitment of nursing staff is one of the most significant challenges facing health care institutions today. Retaining nurses, once recruited and oriented, is yet another significant workforce issue (Wittmann-Price & Kuplen, 2003). The orientation process of new graduate nurses is lengthy and costly. Sixty one percent of newly graduated nurses leave or change employment during their first year of practice (Corwin-Stubbs, 1977).

National turnover rates of 55% are consistent with data collected over the past decade (Wittman-Price & Kuplen, 2003). A high turnover rate of nurses can have

substantial effect on an organization's bottom line. Hospitals must consider this issue seriously in order to control the largest budgeting item: nursing personnel.

A nurse with tenure of less than one year who terminates represents approximately a \$49,000 loss for most institutions (Beecroft, Kunzman, & Krozek, 2001). Current data from the Healthcare Association of Southern California (HASC) demonstrated a turnover rate of new graduate nurses with less than 12 months experience as 46% (283 of 613) during the last three quarters of 2000 (Beecroft, Kunzman & Krozek, 2001). According to data obtained from Jack J. Phillips Performance Resources Organization, Birmingham, Alabama, replacing an RN costs between 75% to 125% of an RN's annual salary. These figures take into account costs related to recruitment (advertising, interviewing, hiring), finding a temporary replacement, employee orientations to the job and facility, salary during orientation, lost productivity, and customer satisfaction (Beecroft, Kuneman & Krozek, 2001). Another source indicates that lost productivity, which takes into account the effects of vacancies on coworkers, supervisors, and subordinates, may account for 76% to 82% of turnover cost (Advisory Board, 2000). Recent data from the National Association of Children's Hospitals and Related Institutions (NACHRI) confirm that replacement costs range from \$40,000 to \$60,000, approximately the annual salary of an RN and as much as a \$100,000 in some cases (Lostocco, 2001).

High turnover of graduate nurse employees can have significant and costly impact on staff development departments. Orientation of these new graduates use more departmental resources than orientation of an experienced RN (Sovie, 1982). To make

this investment in manpower, money, and energy worthwhile, the GN must be retained beyond the first few months of employment (Fisher & Connelly, 1989).

High RN vacancy rates from turnover increase the pressure to orient and employ new graduates as soon as possible. As a result, new graduates are under pressure to perform in life threatening situations without the requisite skill and experience (Oermann et al., 1997). This expedited orientation comes with substantial financial and emotional costs. Inability to handle the pressure and resultant stress is reflected in turnover rates of new graduates RN's at 35% to 60% within the first year (Coeling, 1990; Godinez et al., 1999; Hamilton et al., 1989). In regard to fiscal responsibility nursing administrators must look critically at the amount of time new graduates are given for orientation.

Effectiveness of Preceptored Graduate Nurses

Within the discipline of nursing, graduate nurses must rely on professional RNs in nearly every practice setting for assistance with the practical application of newly acquired nursing knowledge and the acquisition of technical skills (Thomka, 2001). The graduate nurse also looks to RNs for guidance, support, and leadership during this important time of transition from graduate to professional clinician (Coudret, Fuchs, Roberts, Suhrheinrich, & White, 1994). A personal connection is essential between the new hire and environment to provide the graduate with the caring and encouragement that all humans need to succeed (Wittman-Price, & Kuplen, 2003). This personal connection is enhanced by a preceptor.

Preceptorships are comprised of a 1:1 relationship of preceptor to graduate. The graduate and preceptor together provide care for their assigned group of patients (Bashford, 2002). A major responsibility of the preceptor is the clinical supervision of

the novice nurse. Preceptors play dual roles. While performing the usual multifaceted staff duties, preceptors assume additional responsibility of guiding the nurses on a one-to-one basis (Wright, 2002). The role of the preceptor has many components related to orientation, support, teaching, and sharing of clinical expertise (Bain, 1996). The preceptor can also help ease the transition from the graduate nurse role into professional practice. Preceptors are considered expert practitioners by their colleagues (Benner, 1984).

The preceptor model for education has a long history dating back to the time of Florence Nightingale. This method was known as the Nightingale “apprenticeship” model of nurse education (Russell, 1990). The apprenticeship model required nursing students to acquire their nursing skills while on the job. The students were expected to acquire their nursing skills while working as employees of hospital in which they were training. They were assigned to seasoned nurses for guidance and were referred to as “young apprentices” (Greenwood, 2000). This method of supervised education predominated through the 1960s (Nordgren, Richardson & Laurella, 1998). Preceptorship has been used widely in Australia as a means of clinical preparation for students prior to registration. It has been suggested that an undergraduate preceptor program reduces the impact of ‘reality shock’ and role dysfunction following registration (Barnett, 1992; Dobbs, 1988; Howie, 1988; Perry, 1988).

Bain (1996) described preceptors as experienced, clinically competent nurses. Researchers (Bick, 2000; DeSimone, 1999) have defined preceptor roles in numerous ways but agree the terms “experience”, “teacher”, and “role model” are accurate. Preceptors are expected to have experience and advanced clinical skills and be willing to

teach in an effective manner (Wright, 2002). The major responsibility of a preceptor is clinical supervision of novice nurses.

When novice nurses begin their first weeks of practice, some experiences are less than desired. These experiences often lead to feelings of failure, low self-esteem, or questioning of a career choice (Wright, 2002). New graduates usually lack experience and the inability to apply their new learning's in a practice setting. This limited knowledge results in anxiety and difficulty in role transition, described by Kramer (1974) as "reality shock". This adjustment period for the new graduate is often challenging, but if it becomes overwhelming the new nurse may eventually leave the profession (Coudret et al., 1994).

Bick (2000) suggested several reasons for this anxiety, which generally occurs within the first six months of practice and is referred to as "reality shock". First, the emphasis in many nursing education programs is on theory with a concurrent decrease in time for clinical practice. Second, the present shortage of nurses mandates a nurse to be independently responsible for an assignment earlier than in the past. Newly employed nurses need well-planned and guided opportunities in their chosen areas of practice to become comfortable with appropriate nursing judgment and skills. The preceptor has the ability to guide, shape, nurture, influence and supports the novice nurse through this adjustment period (Wright, 2002).

Preceptorships have been used to bridge the gap between nursing education and the reality of the workplace (Wright, 2002). The preceptorship helps students to fully understand the RN role, minimizing the "reality shock" experienced by many new graduates in the past during their first staff nurse job (Coudret et al., 1994; Johnson,

1999; Kersbergen & Hrobsky, 1996; O'Mara, 1997). It has been reported that students who participated in preceptorship programs were more likely to remain in their first position after graduation. They reported a greater degree of work-role satisfaction from direct care activities than those who did not participate in a preceptorship program (McGarth & Princeton, 1987).

Current RN preparation programs in the United Kingdom, North America, and Australia aim to produce beginning practitioners rather than highly competent or expert practitioners (Greenwood, 2000). Benner (1984) discovered that nurse graduates had little understanding of strategies for clinical skill acquisition beyond the advanced beginner or competent levels. Therefore, they have a secondary ignorance in that they do not know what they do not know, and they have a limited understanding of how they go about learning it. Clinical experts (preceptors) are therefore needed to provide the advanced beginner (graduate nurse) with on-the-spot clinical teaching (Benner, 1984). The novice nurse, who is aided in developing technical skills by example and corrective feedback, inculcates the attitudes, values, and beliefs of the experienced professional nurse (Wright, 2002). The graduate learns from the preceptor's clinical expertise to recognize subtle changes, indicating early warning signs or symptoms of change in condition. The graduate learns skills to determine the seriousness of a situation, rapid intervention, and what can and should be done while waiting for the physician to respond to the phone call or to arrive (Benner, 1984).

The preceptorship for graduates bridges theory and nursing practice. Without a preceptorship the graduate may be unaware of all of the staff nurse responsibilities and have a problematic role transition to the new environment (Bashford, 2002). Preceptors

can show graduates how to accomplish the various staff nurse responsibilities that are part of the usual patient care day.

Clinical practice is one of the underpinning elements of the nursing degree (Trevitt, Grealish, & Reaby, 2001). After graduation, registered nurses are expected to be competent in a diverse number of practical skills, as well as being able to demonstrate skills in leadership, assertiveness, critical thinking, and teamwork. For these reasons, the time spent in a preceptorship must be of maximum benefit to the graduate to help them prepare for the realities of the workplace (Trevitt, Grealish, & Reaby, 2001).

Researchers (Fey & Miltner, 2000; Beeman, Jernigan & Hensely, 1999) have stated that 12 weeks was appropriate for a preceptorship program. However, they also documented findings that preceptorships, although most intensive for the first 12 weeks, frequently extend informally into the entire first year. Whitehead (2001) supports the argument for mandatory preceptorship programs, which should be available for a minimum of four months so that newly qualified staff nurses can consolidate their knowledge and feel confident about their role transition and future practice. The United Kingdom Central Council for Nursing (UKCC) Postregistration Education and Practice (PREP) Agenda (1999) advocated that a formal preceptorship program be implemented to all qualified staff. This framework would guide the newly qualified staff nurse through the first 3 to 6 months, which is when role conflict is at its peak (Whitehead, 2001). More research is needed to identify the most effective time frame for the preceptorship and to identify the impact on staff retention and job satisfaction (Bashford, 2002).

Role Transition

In order to enter the nursing profession, graduate nurses must complete the transition to newly qualified nurse. For many, it is a step that is difficult to climb (Gelling, 1992). The challenge of the role transition brings into question many thoughts, feelings, and insecurities for the newly qualified staff nurse.

The transition period is acknowledged as a time of significant stress as graduates endeavor to consolidate their nursing knowledge and gain mastery of clinical skills in a working environment (Goh & Watt, 2003). Holland (1999) depicted the transition as a stressful, yet growth-producing, experience and emphasized the need to gain skills; give care, learn, and do; and differentiate the role of the graduate nurse versus registered nurse. The National Review of Nurse Education in the Higher Education Sector (Reid, 1994) referred to transition as “the period of learning and adjustment to the requirements of nursing in which the graduate acquires the skills, knowledge and values (additional to those learned during undergraduate study) required to become an effective member of nursing” (p. 215).

Transition of a graduate nurse to the role of staff nurse is an iterative process. The graduate nurse needs to assume the activities of a staff nurse while learning how to function within a hospital system (Godinez et al., 1999).

Transitions are complex and multidimensional. They are a result of and result in changes in life, health, relationships, and environments (Meleis, Sawyer, Evin, Messias, & Schumacher, 2000). Transitions can be further defined as starting with an ending, followed by a period of confusion and distress, and leading to a new beginning (Williams, 1999). All transitions are characterized by flow and movement over time

(Meleis & Trangenstein, 1994). Bridges (1991) characterized transition as a time span with an identifiable end point, extending from the first signs of anticipation, perception, or demonstration of change; through a period of instability, confusion, and distress; to an eventual “ending” with a new beginning of stability.

The discussion in nursing literature about the experience of graduate transition mostly originates from overseas (Goh & Watt, 2003). Literature documenting graduate nurse perceptions and feelings regarding their transition to the professional role is scarce (Thomka, 2001). While there has been increasing interest in evaluating professional development schemes for newly qualified nurses, there has been little interest taken in the process of the transition from graduate nurse to staff nurse or needs that this transition brings (Whitehead, 2001). The current literature concerning the transition of graduate nurses is limited but does address the importance of comprehensive orientation programs, preceptors’ competency levels and graduates satisfaction (Brasler, 1993; Godinez et al., 1999; Holland, 1999; Oremann & Moffit-Wolf, 1997; Tradewell, 1996). Additional literature exists that emphasizes the importance of comprehensive orientation programs for new nurses (Balcaín, Lendrum, Doucette, & Maskell, 1997; Beeman, Jernigan, & Hensley, 1999).

Within the nursing profession, the transition from graduate to professional is a common rite of passage experienced by all graduate nurses. Tradewell (1996) described the transition from GN to staff nurse as the “Rites of Passage.” Three phases were identified in this passage: separation, transition, and integration. During this transition phase, Tradewell (1996) relates that the graduate nurse was stripped of formal status – is no longer a student, yet not really a nurse. Activities that assisted with transition

included changing from a student uniform to a nurse uniform, successfully completing a formalized orientation program, and experiencing and succeeding with shift rotation.

The literature on role transitions suggests that the “step up” or transition (Lathlean, 1987) from a senior student nurse to staff nurse is a major change that all registered nurses have to make when they commence their career. The changes described, from being a senior student nurse confident in their knowledge after passing their exams, to becoming a new staff nurse, accepting all the responsibility and accountability of a registered nurse are stressful (Matthewson, 1985). A number of studies in the 1980s point to the reality stress associated with the transition process (Gerrish, 1990; Humphries, 1987; Lathlean, 1987; Vaughan, 1980; Walker, 1986). Humphries (1987) shows that many nurses feel unprepared for the sudden increase in management responsibility and that they find the increase difficult and stressful. Hamel (1990) studied the transition of student to practicing nurse and concludes that newly qualified nurses are typified by fear of failure, fear of total responsibility, and fear of making mistakes. Results of a small study conducted by Whitehead (2001) showed that newly qualified staff finds the transition from student nurse to newly qualified nurse both stressful and frightening.

The transition from graduate to staff nurse involves not only a change in status within the nursing hierarchy but also a major transition from worker, undertaking allocated task, to qualified nurse, allocating to others (Gerrish, 1990). Ultimately, the shift from learner to worker causes role conflicts (Whitehead, 2001). Whitehead’s (2001) study showed that graduates sudden change in responsibility and accountability as something that graduates were totally unprepared for on qualification. However, there

are now findings to suggest that on role transition the newly qualified staff nurse lacks required skills to become a competent practitioner (Maben & Macleod Clark, 1996a; Maben & Macleod Clark, 1996b; Alderman, 1999; Charnley, 1999).

New graduates know that they have a lot to learn (Roman, 2001). The orientation period marks the beginning of this road to learning and perhaps is the most crucial part of transition. It influences both immediate and long-term outcomes in the process of becoming an expert nurse (Delaney, 2003).

Oermann and Moffitt-Wolf (1997) examined 35 new graduate nurses' perceptions of clinical orientation. The study findings revealed that new graduates experienced a moderate amount of stress during orientation, especially in the areas of experience, interactions with physicians, organizational skills, and new situations. Godinez et al. (1999) examined transition from graduate to staff nurse during the first three weeks of orientation. Content analysis of daily feedback sheets revealed five themes: the need for support; guidance; experience; recognition of institutional idiosyncrasies; and interpersonal dynamics. Holland (1999) used an ethnographic methodology to explore graduate nurse orientation. Her findings as previously mentioned indicated a need of more hands on experience. Orientation is both an end and beginning for the new graduate. Graduates arrived at their new positions with mixed emotions. Feelings of pride and happiness are tempered with anxious anticipation (Delaney, 2003). Delaney (2003) found that graduates who are provided with a transitional framework that emphasizes the importance of a comprehensive orientation have a greater chance of a successful transition from student to staff.

Accommodating the transition between graduation and acquisition of the professional nursing role is a challenge to expert clinicians. An experienced nurse can have a tremendous impact (either positive or negative) on the professional life of a new graduate (Roman, 2001). Difficulties that some new graduates experience when transitioning from new graduate to staff nurse, is usually directly related to how they are being treated (Meissner, 1999). A theme in much of the literature is that graduates expect support from experienced nurses but do not receive it (Goh & Watt, 2003). Many graduates actually perceived that they were badly treated by their nursing colleagues and that their transition was significantly stressful or they had a negative outcome (Buckenham, 1994; Cobal, 1998).

The importance of GN support is well documented. There is general agreement in the literature that if graduates do not receive adequate support they experience reduced job satisfaction which has significant influence on professional commitment, staff retention turn-over rates, and ultimately the cost of quality patient care (Greenwood, 2000; Duncan, 1997; Buckenham, 1994). Graduate nurses seek mentoring and nurturing to aid their transition from graduate to professional nurse (Currie, Vierke, Greer, 2000). Goh and Watt (2003) found that a supportive environment, the ability to fit in, and positive constructive feedback appear to be significant factors that influence the graduates' experience. They also noted that a supportive environment primarily through the contribution of preceptors was a factor highly valued by graduates.

Schempp and Rompre (1986) recommended that employers in the United States provide preceptors to orientate and help graduates transition into their new role. McGarth and Princeton (1987) described a three-month preceptor program for new graduates.

Preceptors operated as resource people and role models to facilitate the transition of the graduate. Allanach and Jennings (1990) concluded through their research that preceptor programs are necessary for the graduate to successfully assume the role of registered nurse.

Role transition from graduate to staff nurse is a universal phenomenon. A successful transition experience has the potential to be a powerful motivator for the graduate nurse as is the nurturing and encouragement by RNs (Goh & Watt, 2002). However, the time it takes for this role transition to occur is greatly affected by the participant's capacity to adapt to new circumstances and the environment. It is therefore imperative that further studies be conducted to examine the amount of time it takes for the graduate nurse to transition into the role of the professional nurse.

Summary

In summary the literature identifies transitional issues that can affect graduate nurse transition. Difficulties encountered were unrealistic expectations of what the graduates are prepared for, increased responsibility and accountability that come with qualification, lack of acceptance from colleagues, failure to fit in, high turnover rates, ineffective orientation, negative attitudes, staff resistance to change and a non-supportive environment. All of these issues can have a significant impact on the actual time it takes for a graduate nurse to transition into the role of the professional nurse. In examining graduate nurses' experiences, it is necessary to reconsider what constitutes a realistic timeframe for this transition to take place. The days of being able to take new graduates off the shelf and use them on day one have gone. Healthcare organizations that come to

this realization and work towards a realistic timeframe for transitioning will go a long way toward easing the transition process for newly qualified nurses and their retention.

CHAPTER 3

METHODOLOGY

Purpose of the Study

The purpose of this study was to investigate whether six months was an adequate amount of time for new graduate nurses to transition into the role of a professional nurse. This study was conducted in a 236-bed teaching hospital, which employed graduate nurses located in the Midwest. An outcomes measurement tool was used to track graduate nurse progress towards mastery of 14 achievement indicators applied to the professional nurse role. These measurements occurred at different intervals during the graduate nurses' orientation program.

Instrument Development

The tool selected for this study was the Outcome Engineering/Journey Mapping Instrument. Dr. Barry Kibel, a senior research scientist at the Pacific Institute for Research and Evaluation, developed this instrument in the mid 1990s. Dr. Kibel is primarily known for his interest in Internet-based frameworks for self-reflective practice and program monitoring and tracking. In 1994, Dr. Kibel developed an Internet-based tool that helped organizations focus on transformation and growth processes that supported their planning, quality assurance and accountability activities. Dr. Kibel designs and customizes this instrument for individuals, groups, organizations and communities. Each Outcome Engineering Application has a similar structure but is customized to match the unique characteristics of the initiative and the associated change

process. The tool has been applied to such diverse program areas as youth asset building, substance abuse treatment, family preservation, health ministry, community health promotion, parish nursing, medical resident preparation, and neighborhood development.

Outcome Engineering is a highly descriptive but also normative model. The term “descriptive” means it captures what has happened or is happening. The term “normative” points to what ought to be happening (Kibel, 1999). The tool acts as a yardstick to track and measure how close individuals are getting to desired levels of achievement.

Dr. Kibel worked with this researcher in the spring of 2001, on the customization of this instrument and its application in regards to the transition process of the GNs. The instrument was designed to be used on an ongoing basis for journal keeping, bench marking, progress tracking, real-time reporting, self-reflection, and cross-site leaning. Permission to use this instrument was granted by the Institutional Review Board through the University of North Dakota in October of 2003. The actual tool consisted of 14 achievement indicators as they applied to professional nurse role development (Appendix A). Responses were based on a six-point scale, which included:

1. observed others doing it,
2. tried it once,
3. tried it a few times,
4. does it routinely,
5. have reached mastery with it, and
6. can coach others to do it.

Progress was tracked and gauged along a universal, prototype-scoring mechanism. As progress was made, the score increased for the individual being mapped. The score communicated movement toward an ideal outcome for the individual. The instrument mapped the progress of the GN in regards to maturation and mastery of competencies.

Validity

Dr. Kibels' Outcome Engineering approach has been used in many different industries and countries. Outcome Engineering was originally used in the United States to help clients in the social service sector meet their reporting needs while improving performance. It was later field tested with the West African Rural Foundation (Senegal), the Nagaland Environmental Protection and Economic Development Project (India), the International Model Forest Network Secretariat (Canada), and in other projects in East Africa, South Asia, and Latin America (Kibel, 1999). The Pacific Institute for Research and Evaluation validated the tool in 1994 (Kibel, 1999). Current users of the Outcome Engineering/Journal Mapping tool include hospitals, health systems, service providers, foundations, universities, and state agencies.

The following 14 performance achievement indicators that were selected for this instrument:

1. I am able to perform and document assessments independently;
2. I am able to identify patient problems and potential complications using the Guidelines of Care;
3. I am able to evaluate the effects of care provided to patients;
4. I am able to plan and prioritize care for a group of assigned patients;
5. I am able to make independent decisions about patient care issues;
6. I am able to make assignments and delegate care;

7. I am able to collaborate with physicians, and interdisciplinary care providers;
8. I am able to assume responsibility and accountability for my practice;
9. I am able to transfer nursing theory from my educational program to clinical practice;
10. I am able to advocate for patients on legal and ethical aspects of care;
11. I am able to demonstrate competence in providing quality, cost effective care;
12. I have been able to develop leadership skills;
13. I have formulated a plan for continued development of career goals; and
14. I recognize the value of being part of a large health system and the opportunities it provides.

These indicators were based on objectives written by the researcher and formatted by Dr. Kibel. This researcher's overall objective was for graduate nurses to acquire the knowledge and skills necessary to function independently in caring for patients.

Achievement indicator number one states that the graduate nurse must perform and document patient assessments independently. This ability is essential since every patient must have a nursing assessment performed at the beginning of each shift. This complex skill involves a total body systems review, which includes every major organ. This review quickly points out any abnormalities in patients that may have developed or could be developing as part of their illness. The graduate's ability to document these findings accurately is essential to the patient as physicians' orders can and will be based on these findings.

Achievement indicator number two states that the graduate must be able to identify patient problems and potential complications using the Guidelines of Care. The

Guidelines of Care are based on specific medical and nursing diagnosis, which are validated by evidence-based practice. The graduate must be familiar with these guidelines so that the graduate can anticipate the patient's probable course of treatment and avoid any complications.

Assessment indicator number three states that the graduate must be able to evaluate the effects of care provided to patients. The graduate must be able to validate that the care being provided is beneficial to the patient. For example, proper positioning and turning of a patient will prevent skin breakdown and pneumonia. The graduate must understand that every action and intervention being carried out must be analyzed for effectiveness, timeliness, safety, cost, and patient comfort.

Assessment indicator four states that the graduate must plan and prioritize care for a group of assigned patients. The graduate must have the ability to recognize and establish patient goals that will be carried out during a shift. The graduate must be able to develop a plan of care for how these are to be accomplished. In addition, the graduate must then be able to arrange from highest priority how this care is to be organized and completed during a working shift.

Assessment indicator five states that the graduate makes independent decisions about patient care issues. The graduate must be able to rely on their own critical thinking skills to problem solve effectively. For example, at what point in time does a graduate nurse contact a physician about an abnormal lab value. The graduate must be decisive and have confidence in decision-making ability.

Achievement indicator number six states that the graduate nurse is able to make assignments and delegate care. A graduate nurse is expected to be a member of a team.

This team often consists of other health care providers, such as licensed practical nurses and nurse aides. The graduate nurse is often in charge of a group of patients and is given a team of health care providers who will assist the nurse in providing the care.

Delegation is the transferring of responsibility for the performance of an activity or task while retaining accountability for the outcome. The nurse must know the qualifications of the team and what duties can and cannot be delegated, in accordance with the State Board of Nursing in which the nurse is licensed. The nurse must delegate appropriately in order to ensure that the work gets completed by the end of the shift and that the patients have received the care that they require.

Achievement indicator seven states that the graduate nurse is able to collaborate with physicians, and interdisciplinary care providers. The nurse must be able to communicate effectively. It is key that the nurse be able to speak clearly, delineate, and share clinical findings of the patients with all healthcare providers, collaborating with others allows for a blending of ideas and expertise. The blending of all perspectives allows for the sharing of knowledge, which improves the quality of care, and benefits the patient in a positive outcome.

Achievement indicator eight states that the graduate nurse is able to assume responsibility and accountability for their nursing practice. The new nurse must be committed to the profession. The graduate nurse must be knowledgeable and competent in order to assume the care of others. The nurse recognizes the ultimate responsibility for the care that is given on a shift. The nurse advocates for the patients at all times on their behalf. Accountability involves follow-up and reflective analysis of one's decisions to evaluate effectiveness in selecting the best course of action for patient care.

Achievement indicator nine states that the new nurse is able to transfer nursing theory from her educational program to clinical practice. It is imperative that the new nurse can take what they have learned in school and apply it to the practice arena. Nursing is a practice-based profession. Operationalizing what the graduate nurse has observed and learned is key to the nurse's success. Practical application and hands-on experience is how the nurse validates the efficacy of what has been learned.

Achievement indicator ten states that the new nurse is able to advocate for patients on legal and ethical aspects of care. Often the patients must rely on the nurse to be their voice when it comes to making the appropriate care decisions. Illness and family dynamics often render patients unable to advocate for themselves. Patients look to the nurse to provide them with the most recent and updated knowledge in regards to their care. Because a nurse is often the one provider who is with the patient twenty-four hours a day, this is the most logical person to represent the patients' best interests. Nurses who work at the bedside have the knowledge and expertise to know what really works for their patients.

Achievement indicator eleven states that the graduate nurse is able to demonstrate competence in providing quality, cost effective care. With today's skyrocketing healthcare costs it has become more apparent that it is essential to combine resources, competencies, and contributions of all disciplines to provide the highest quality of care. Nurses must be able to demonstrate that they have the knowledge and expertise to implement nursing interventions that are instrumental in producing quality outcomes that are cost effective.

Achievement indicator twelve states that the graduate nurse must develop leadership skills. It is necessary for nurses to be knowledgeable and to become content experts in their field. The new nurse can learn to become a leader by making good clinical decisions, learning from mistakes and seeking guidance, collaborating closely with professional nurses, and striving to improve performance during each patient interaction. Leadership skills that the graduate nurse must master include clinical care coordination, team communication, delegation, and knowledge building.

Achievement indicator thirteen states that the graduate nurse has formulated a plan for continued development of career. Nursing is an evolving profession that offers many opportunities. There is a lifelong learning pursuit for nurses in order to keep up with this ever-changing profession. Nurses must, therefore, be involved in their local, state, and national organizations to stay current with these changes. In addition, nurses must seek out continuing educational opportunities that enhance their practice and keep them current.

Achievement indicator fourteen states that the graduate nurse recognizes the value of being part of a large health system and the opportunities it provides. As a member of a large health system, the nurse is presented with many options. The graduate can choose many different clinical settings in which to practice. There is the opportunity to be involved in research as many large healthcare organizations conduct clinical trials and have affiliations with teaching universities and medical programs. The graduate often has the ability to explore other nursing roles such as advanced practice or management, and often can choose a career path that involves advancing education.

Research Participants

The sample for this study consisted of 14 graduate nurses enrolled in a residency program during a two year time period at a 236 bed teaching facility in central North Dakota. The graduate nurses had completed a four-year degree program in nursing and had been hired to fill registered nurse positions in the teaching facility. The residency program required that the graduate nurses work on a medical/surgical floor for a minimum of six months with an assigned preceptor. The graduate nurses were asked to complete the Outcome Engineering/Journey Mapping tool at one month, four months, and six months while they were in the residency program. All participants were informed that completing the tool was voluntary. Six graduate nurses enrolled in the program in 2002, and eight graduate nurses took part in the program in 2003. There were a total of 14 participants: all participants were female and their ages ranged from 23 to 32 years. One participant dropped out of the residency program after four months of employment.

Procedure

The graduate nurses completed the achievement tool via computer on the nursing unit where they were working. They were given a security code with which to access the instrument. No names or identifiers were used. The graduates created their own aliases and logged in under these during the six-month period. Graduates completed the 14 achievement indicators at one month, four months, and six months. A computer report of the scores was generated following each of these time frames and forwarded to the researcher by the program coordinator.

Data Collection

This study was dependent upon the voluntary participation of the 14 graduate nurses enrolled in the residency program. The nurses were measured on a six-item scale on terms of when mastery occurred. The six responses included: observed others doing it; tried it once; tried it a few times; do it routinely; have reached mastery with it; and can coach others to do it. The researcher was dependent upon the program coordinator of the residency program to forward all data that was collected and completed. The data collected was generated in 2002 and 2003.

Data Analysis

A repeated measure ANOVA (one-way analysis of variance) design was used to analyze the data at different intervals (one month, four months and six months). Pairwise comparisons (Tukey's Honestly Significant Difference) THSD were calculated to detect mean differences between the different time intervals. Descriptive and inferential statistics that included the means, standard deviations, and a one-way analysis of variance (ANOVA) were used to measure differences over time. All data were analyzed using the SPSS statistical software package.

CHAPTER 4

ANALYSIS OF DATA

Findings

Data were obtained from 14 graduate nurses who participated in a residency program during a two year time period. The basic focus of this research was to investigate whether six months was an adequate amount of time for new graduate nurses to transition into the role of the professional nurse. Graduate nurses were measured at three different intervals (one, four, and six months) using a 14-item achievement indicator tool. These nurses were measured on a six-item scale on terms of when mastery occurred. A second research question determined if there were significant differences over the three measurement times (one, four, and six months) on the 14-achievement indicators. Fourteen subquestions were added to the second research question to reflect each of the individual indicators.

Research Question One

Is six months an adequate amount of time for new graduate nurses to transition to the role of professional nurse?

Graduate nurses were measured at three different intervals (one, four and six months) using the 14-item achievement indicator tool as to when mastery occurred. Mastery was defined as having full command of the subject matter or task. Mastery was the fifth response on the six-item scale for the 14 achievement indicators. Table 1 summarizes the graduate nurses' results in regards to mastery.

Table 1. Number of Graduate Nurses That Achieved Mastery on the 14 Achievement Indicators at the Three Different Time Intervals.

Indicators	Time 1 (1 month)	Time 2 (4 months)	Time 3 (6 months)
1. Document independently	3	7	10
2. Identify patient problems	0	4	9
3. Evaluate care	1	5	9
4. Plan and prioritize	0	5	10
5. Independent decision making	0	3	9
6. Delegate care	0	3	4
7. Collaborate with physicians	0	2	7
8. Assume responsibility	0	3	9
9. Transfer nursing theory	0	3	10
10. Legal and ethical issues	0	2	7
11. Demonstrate competence	0	4	6
12. Leadership skills	0	1	7
13. Career goals	0	3	5
14. Benefits of a health system	0	5	8

Results of data obtained during the graduate nurse first month indicated that only four nurses had reached mastery in regards to the 14 achievement indicators. Three (21%) nurses out of 14 had mastered achievement indicator number one. This indicator stated that nurses could perform and document assessment independently. One (7%) nurse out of 14 had mastered the third indicator, which states that the nurse was able to plan and prioritize care for a group of patients. There was a 2% overall rate of mastery by the 14 graduates at the end of the first month.

During the fourth month substantial growth occurred with graduate nurses reaching mastery on individual indicators. Out of the 14 indicators there were no indicators that did not have one or more nurses reaching the mastery level. Achievement indicator number one had the most nurses achieving mastery. Seven (50%) graduate nurses could perform and document assessments independently. Indicators 3, 4 and 14 had five (36%) nurses achieving mastery. Four (26%) of the nurses had achieved

mastery on indicators 2 and 11. Twenty-one percent (3 nurses) had gained mastery of indicators 5, 6, 8, 13 and 19. Indicators 7 and 10 had 2 graduates (14%) who achieved mastery. The lowest ranking indicator was number 12, with only one (7%) nurse reaching mastery in developing leadership skills at the 4 month mark. The overall rate of mastery for the 14 indicators was 25%. There were no graduate nurses who had mastered all 14 indicators by month four.

By the end of six months there was continued growth at the mastery level. Three individual indicators showed that ten (71%) nurses had reached mastery. Indicator number one, four and nine showed that these graduate nurses could document independently, plan and prioritize care and transfer their nursing theory into practice. Nine (64%) had mastered indicators 2, 3, 5, and 8 at six months. Indicator 14 confirmed that eight (57%) of the graduates could benefit from being part of a large health system. Seven (50%) nurses achieved mastery on indicators 7, 10 and 12. Indicator 11 had 43% (6) of the nurses being able to demonstrate competency on month 6. Five (36%) nurses had mastered indicator 13 on formulating a plan related to career goals and only four (26%) nurses could delegate care effectively by the end of the six months. Overall, there was a 56% rate of mastery on all of the achievement indicators. There were no graduate nurses who had mastered all 14 indicators at end of six months.

Research Question Two

Are there significant differences over time on the three measurement times (one, four, six months) on the 14-achievement indicators by the graduate nurses?

Descriptive statistics measuring means, standard deviations (SD), repeated measures ANOVA, and pairwise comparisons at one month, four months and six-month

intervals of the 14-achievement indicators were calculated. These statistics were used to determine if the increase in means over time was statistically significant.

Subquestion 2a. Were there significant differences over the three measurement times (one, four, six months) on documenting assessments, achievement indicator number one?

The results for achievement indicator one are presented in Table 2. There is a significant difference ($F = 9.23, p = .001$) among intervals on graduate nurse's documenting assessments. Using pairwise comparisons, the researcher found statistically significant improvement of graduate nurse's ability to document assessments between Time 1 and Time 2 ($p = .039$) and between Time 1 and Time 3 ($p = .001$). There was no statistical significant difference between Time 2 and Time 3 ($p = .653$).

Table 2. Means, Standard Deviations (SD), Repeated Measures ANOVA Results, and Pairwise Comparisons of Graduate Nurses on Documenting Assessments: Achievement Indicator One.

	1 Month	4 Months	6 Months			Pairwise Comparison		
	Time 1	Time 2	Time 3	<i>F</i> value	<i>p</i>	1 – 2	1 – 3	2 – 3
Means	4.07	4.57	4.86	9.23	.001	*	*	-
SD	.62	.65	.6					

Subquestion 2b: Were there significant differences over the three measurement times (one, four, six months) on identification of patient problems and complications, achievement indicator number two?

The results for achievement indicator two are presented in Table 3. There is a significant difference ($F = 18.25, p < .001$) among intervals on graduate nurse's identification of patient problems and complications. Using pairwise comparisons, the researcher found statistically significant improvement of graduate nurse's ability to

identify patient problems and complications between Time 1 and Time 2 ($p = .008$) and between Time 1 and Time 3 ($p < .001$). There was no statistical significant difference between Time 2 and Time 3 ($p = .57$).

Table 3: Means, Standard Deviations (SD), Repeated Measures ANOVA Results, and Pairwise Comparisons of Graduate Nurses on Identification of Patient Problems and Complications: Achievement Indicator Two.

	1 Month	4 Months	6 Months			Pairwise Comparison		
	Time 1	Time 2	Time 3	<i>F</i> value	<i>p</i>	1 – 2	1 – 3	2 – 3
Means	3.71	4.43	4.64	18.25	<.001	*	*	-
SD	.47	.64	.50					

Subquestion 2c. Are there significant differences over the three measurement times (one, four, six months) on evaluation of care, achievement indicator number three?

The results for achievement indicator three are presented in Table 4. There is a significant difference ($F = 11.78, p < .001$) among intervals on graduate nurse's ability to a evaluate care. Using pairwise comparisons, the researcher found statistically significant improvement of graduate nurse's ability to evaluate care between Time 1 and Time 2 ($p = .039$) and between Time 1 and Time 3 ($p = .003$). There was no statistical significant difference between Time 2 and Time 3 ($p = .120$).

Table 4: Means, Standard Deviations (SD), Repeated Measures ANOVA Results, and Pairwise Comparisons of Graduate Nurses on Evaluation of Care: Achievement Indicator Three.

	1 Month	4 Months	6 Months			Pairwise Comparison		
	Time 1	Time 2	Time 3	<i>F</i> value	<i>p</i>	1 – 2	1 – 3	2 – 3
Means	4.00	4.50	4.79	11.78	<.001	*	*	-
SD	.39	.65	.70					

Subquestion 2d. Are there significant differences over the three measurement times (one, four, six months) on prioritizing care, achievement indicator number four?

The results for achievement indicator four are presented in Table 5. There is a significant difference ($F = 7.58, p = .003$) among intervals on graduate nurses ability to prioritize care. Using pairwise comparisons, the researcher found statistically significant improvement of graduate nurse's ability to prioritize care between Time 1 and Time 2 ($p = .010$) and between Time 1 and Time 3 ($p = .013$). There was no statistical significant difference between Time 2 and Time 3 ($p = .255$).

Table 5: Means, Standard Deviations (SD), Repeated Measures ANOVA Results, and Pairwise Comparisons of Graduate Nurses on Prioritizing Care: Achievement Indicator Four.

	1 Month	4 Months	6 Months			Pairwise Comparison		
	Time 1	Time 2	Time 3	<i>F</i> value	<i>p</i>	1 – 2	1 – 3	2 – 3
Means	3.36	4.21	5.00	7.58	.003	*	*	-
SD	1.45	1.37	.78					

Subquestion 2e. Are there significant differences over the three measurement times (one, four, six months) on independent decision making, achievement indicator number five?

The results for achievement indicator five are presented in Table 6. There is a significant difference ($F = 13.9, p < .001$) among intervals on graduate nurse's ability to make independent decisions. Using pairwise comparisons, the researcher found statistically significant improvement of graduate nurse's ability to make independent decisions between Time 1 and Time 2 ($p = .008$) and between Time 1 and Time 3 ($p = .001$). There was no statistical significant difference between Time 2 and Time 3 ($p = .312$).

Table 6: Means, Standard Deviations (SD), Repeated Measures ANOVA Results, and Pairwise Comparisons of Graduate Nurses on Independent Decision Making: Achievement Indicator Five.

	1 Month	4 Months	6 Months	<i>F</i> value	<i>p</i>	Pairwise Comparison		
	Time 1	Time 2	Time 3			1 – 2	1 – 3	2 – 3
Means	3.43	4.29	4.57	13.9	<.001	*	*	-
SD	.51	.47	.64					

Subquestion 2f. Are there significant differences over the three measurement times (one, four, six months) on assignments and delegation, achievement indicator number six.

The results for achievement indicator six are presented in Table 7. There is a significant difference ($F = 20.46, p < .001$) among intervals on graduate nurse's ability to make assignments and delegate. Using pairwise comparisons, the researcher found statistically significant improvement of graduate nurse's ability to make assignments and delegate between Time 1 and Time 2 ($p = .007$) and between Time 1 and Time 3 ($p < .001$). There was no statistical significant difference between Time 2 and Time 3 ($p = .083$).

Table 7: Means, Standard Deviations (SD), Repeated Measures ANOVA Results, and Pairwise Comparisons of Graduate Nurses on Assignments and Delegation: Achievement Indicator Six.

	1 Month	4 Months	6 Months	<i>F</i> value	<i>p</i>	Pairwise Comparison		
	Time 1	Time 2	Time 3			1 – 2	1 – 3	2 – 3
Means	2.57	3.64	4.07	20.46	<.001	*	*	-
SD	1.09	1.08	.73					

Subquestion 2g. Are there significant differences over the three measurement times (one, four, six months) on collaboration, achievement indicator number seven?

The results for achievement indicator seven are presented in Table 8. There is a significant difference ($F = 18.61, p < .001$) among intervals on graduate nurses ability to

collaborate. Using pairwise comparisons, the researcher found statistically significant improvement of graduate nurses ability to collaborate between Time 1 and Time 2 ($p = .009$) and between Time 1 and Time 3 ($p < .001$). There was no statistical significant difference between Time 2 and Time 3 ($p = .083$).

Table 8: Means, Standard Deviations (SD), Repeated Measures ANOVA Results, and Pairwise Comparisons of Graduate Nurses on Collaboration: Achievement Indicator Seven.

	1 Month	4 Months	6 Months			Pairwise Comparison		
	Time 1	Time 2	Time 3	<i>F</i> value	<i>p</i>	1 – 2	1 – 3	2 – 3
Means	2.79	4.14	4.57	18.61	<.001	*	*	-
SD	1.12	.60	.85					

Subquestion 2h. Are there significant differences over the three measurement times (one, four, six months) on responsibility and accountability, achievement indicator number eight?

The results for achievement indicator eight are presented in Table 9. There is a significant difference ($F = 16.12, p < .001$) among intervals on graduate nurse's ability to assume responsibility and accountability. Using pairwise comparisons, the researcher found no statistical significance between Time 1 and Time 2 ($p = .120$) on graduate nurse's ability to assume responsibility and accountability. There was statistical significant difference between Time 1 and Time 3 ($p = .001$) and Time 2 and Time 3 ($p = .010$).

Table 9: Means, Standard Deviations (SD), Repeated Measures ANOVA Results, and Pairwise Comparisons of Graduate Nurses on Responsibility and Accountability: Achievement Indicator Eight.

	1 Month	4 Months	6 Months			Pairwise Comparison		
	Time 1	Time 2	Time 3	<i>F</i> value	<i>p</i>	1 – 2	1 – 3	2 – 3
Means	3.93	4.21	4.71	16.12	<.001	-	*	*
SD	.27	.43	.47					

Subquestion 2i. Are there significant differences over the three-measurement times (one, four, six months) on ability to transfer theory to practice, achievement indicator number nine?

The results for achievement indicator nine are presented in Table 10. There is a significant difference ($F = 5.32, p = .012$) among intervals on graduate nurse's ability to transfer theory to practice. Using pairwise comparisons, the researcher found no statistical significance between Time 1 and Time 2 ($p = .056$) on graduate nurse's ability to transfer theory to practice. There was statistical significance between Time 1 and Time 3 ($p = .040$). There was no statistical significant difference between Time 2 and Time 3 ($p = .653$).

Table 10: Means, Standard Deviations (SD), Repeated Measures ANOVA Results, and Pairwise Comparisons of Graduate Nurses Ability to Transfer Theory to Practice: Achievement Indicator Nine.

	1 Month	4 Months	6 Months			Pairwise Comparison		
	Time 1	Time 2	Time 3	<i>F</i> value	<i>p</i>	1 – 2	1 – 3	2 – 3
Means	3.86	4.21	4.50	5.32	.012	-	*	-
SD	.36	.43	.85					

Subquestion 2j. Are there significant differences over the three-measurement times (one, four, six months) on ability to advocate for ethical and legal issues, achievement indicator number ten?

The results for achievement indicator ten are presented in Table 11. There is a significant difference ($F = 10.90, p < .001$) among intervals on graduate nurse's ability to advocate for ethical and legal issues. Using pairwise comparisons, the researcher found no statistical significance between Time 1 and Time 2 ($p = .120$) on graduate nurse's ability to advocate for ethical and legal issues. There was statistical significant difference between Time 1 and Time 3 ($p = .003$) and Time 2 and Time 3 ($p = .036$).

Table 11: Means, Standard Deviations (SD), Repeated Measures ANOVA Results, and Pairwise Comparisons of Graduate Nurses Ability to Advocate for Ethical and Legal Issues: Achievement Indicator Ten.

	1 Month	4 Months	6 Months			Pairwise Comparison		
	Time 1	Time 2	Time 3	<i>F</i> value	<i>p</i>	1 – 2	1 – 3	2 – 3
Means	3.00	3.86	4.57	10.90	<.001	-	*	*
SD	1.52	.95	.64					

Subquestion 2k. Are there significant differences over the three measurement times (one, four, six months) on competence, achievement indicator number eleven?

The results for achievement indicator eleven are presented in Table 12. There is a significant difference ($F = 8.96, p = .001$) among intervals on graduate nurse's competence. Using pairwise comparisons, the researcher found no statistical significance between Time 1 and Time 2 ($p = .051$) on graduate nurse's competence. There was statistical significance between Time 1 and Time 3 ($p = .003$). There was no statistical significant difference between Time 2 and Time 3 ($p = .667$).

Table 12: Means, Standard Deviations (SD), Repeated Measures ANOVA Results, and Pairwise Comparisons of Graduate Nurses on Competence: Achievement Indicator Eleven.

	1 Month	4 Months	6 Months			Pairwise Comparison		
	Time 1	Time 2	Time 3	<i>F</i> value	<i>p</i>	1 – 2	1 – 3	2 – 3
Means	3.56	4.29	4.50	8.96	.001	-	*	-
SD	1.08	.47	.65					

Subquestion 2l. Are there significant differences over the three measurement times (one, four, six months) on leadership skills, achievement indicator number twelve?

The results for achievement indicator twelve are presented in Table 13. There is a significant difference ($F = 17.13, p < .001$) among intervals on graduate nurses leadership skills. Using pairwise comparisons, the researcher found statistically significant improvement of graduate nurse's leadership skills between Time 1 and Time 2 ($p = .019$), Time 1 and Time 3 ($p < .001$) and Time 2 and Time 3 ($p = .039$).

Table 13: Means, Standard Deviations (SD), Repeated Measures ANOVA Results, and Pairwise Comparisons of Graduate Nurses on Leadership Skills: Achievement Indicator Twelve.

	1 Month	4 Months	6 Months			Pairwise Comparison		
	Time 1	Time 2	Time 3	<i>F</i> value	<i>p</i>	1 – 2	1 – 3	2 – 3
Means	2.43	3.86	4.36	17.13	<.001	*	*	*
SD	1.55	.53	.74					

Subquestion 2m. Are there significant differences over the three measurement times (one, four, six months) on career planning, achievement indicator number thirteen?

The results for achievement indicator thirteen are presented in Table 14. There is a significant difference ($F = 17.23, p < .001$) among intervals of graduate nurses on career planning. Using pairwise comparisons, the researcher found statistically significant improvement of graduate nurses on career planning between Time 1 and Time

2 ($p = .006$) and between Time 1 and Time 3 ($p < .001$). There was no statistical significant difference between Time 2 and Time 3 ($p = .409$).

Table 14: Means, Standard Deviations (SD), Repeated Measures ANOVA Results, and Pairwise Comparisons of Graduate Nurses on Career Planning: Achievement Indicator Thirteen.

	1 Month	4 Months	6 Months			Pairwise Comparison		
	Time 1	Time 2	Time 3	<i>F</i> value	<i>p</i>	1 – 2	1 – 3	2 – 3
Means	2.71	3.93	4.29	17.23	<.001	*	*	-
SD	1.44	.83	.91					

Subquestion 2n. Are there significant differences over the three measurement times (one, four, six months) on recognition of being part of a large health system, achievement indicator number fourteen?

The results for achievement indicator fourteen are presented in Table 15. There is a significant difference ($F = 10.26$, $p = .001$) among intervals on graduate nurse's recognition of being part of a large health system. Using pairwise comparisons, the researcher found no statistically significance between Time 1 and Time 2 ($p = .063$) on graduate nurse's recognition of being part of a large health system. There was statistical significance between Time 1 and Time 3 ($p = .003$). There was no statistical significant difference between Time 2 and Time 3 ($p = .204$).

Table 15: Means, Standard Deviations (SD), Repeated Measures ANOVA Results, and Pairwise Comparisons of Graduate Nurses Recognition of Being Part of a Large Health System: Achievement Indicator Fourteen.

	1 Month	4 Months	6 Months			Pairwise Comparison		
	Time 1	Time 2	Time 3	<i>F</i> value	<i>p</i>	1 – 2	1 – 3	2 – 3
Means	3.29	4.07	4.57	10.26	.001	-	*	-
SD	1.44	1.38	1.02					

An overall review of the statistical significance of the mean differences of the graduate nurses' scores over time on the 14 Achievement Indicators is summarized in Table 16.

Table 16: Means and ANOVA Over the Repeated Measures of Graduate Nurses On All 14 Achievement Indicators and Levels of Significance.

Indicator	Time 1	Time 2	Time 3					
	1 mo	4 mo	6 mo			Time	Time	Time
	M ₁	M ₂	M ₃	F	P	1 - 2	1 - 3	2 - 3
1	4.07	4.57	4.86	9.23	.001	*	*	-
2	3.71	4.43	4.64	18.25	< .001	*	*	-
3	4.00	4.50	4.79	11.78	< .001	*	*	-
4	3.36	4.21	5.00	7.58	.003	*	*	-
5	3.43	4.29	4.57	13.90	< .001	*	*	-
6	2.57	3.64	4.07	20.46	< .001	*	*	-
7	2.79	4.14	4.57	18.61	< .001	*	*	-
8	3.93	4.21	4.71	16.12	< .001	-	*	*
9	3.86	4.21	4.50	5.32	.012	-	*	-
10	3.00	3.86	4.57	10.90	< .001	-	*	*
11	3.56	4.29	4.50	8.96	.001	-	*	-
12	2.43	3.86	4.36	17.13	< .001	*	*	*
13	2.71	3.93	4.29	17.23	< .001	*	*	-
14	3.29	4.07	4.57	10.26	.001	-	*	-

* = statistically significant ($p < .05$)

- = not statistically significant ($p > .05$)

Using a repeated measures of ANOVA the researcher found that there was statistical significance between Time 1 and Time 3 on all 14-achievement indicators. Statistical significance was found between Time 1 and Time 2 on indicators 1 through 7, 12 and 13. There were no statistical differences between Time 1 and Time 2 on achievement indicators 8 through 11, and 14. There was significant difference between Time 2 and Time 3 on achievement indicators 8, 10 and 12. There was no significant difference on achievement indicators 1 through 7, 9, 11, 13 and 14.

CHAPTER 5

DISCUSSION

Summary

The purpose of the study was to investigate whether six months was an adequate amount of time for new graduate nurses to transition into the role of a professional nurse. Fourteen graduate nurses participated in this study using an Outcome Engineering Tool, which measured levels of performance on 14-achievement indicators at three separate intervals. The graduates were asked to complete the tool at one month, four months and six month intervals. Statistics measuring means, standard deviations and ANOVA over repeated measures were used to determine the differences between the individuals within the group and the variance due to the difference between the groups.

The study demonstrated that at six months no graduate nurses had successfully mastered all 14-achievement indicators. There was significant differences found between the first month and six month on all achievement indicators, however, mastery was not achieved on all 14-achievement indicators.

After the first month only four nurses had reached mastery on two out of the 14-achievement indicators resulting in a 2% rate of mastery. The fourth month showed that overall the 14 graduates had achieved a 25% rate of mastery on the 14-achievement indicators. At the end of six months the graduates had reached the level of mastery on 56% of the achievement indicators.

As described earlier, statistical significance was shown between the first month and the six-month in regards to the level of mastery that occurred. All 14 indicators showed statistical significance between Time 1 and Time 3. Nine out of the 14-achievement indicators showed statistical significance between Time 1 and Time 2. There were only three out the 14 achievement indicators that showed statistical significance between Time 2 and Time 3.

These findings indicate that the transition period for a new graduate to transition to a professional nurse is longer than six months. However, the study was limited in length (six months) and, therefore, did not allow the researcher to determine what amount of time is necessary for a graduate nurse to transition. Further investigation is needed in this arena in order to determine the correct amount of time for transition to occur.

Findings

1. Is six months an adequate amount of time new graduate nurses to transition to the role of a professional nurse?

These initial findings show that a six-month time frame is not long enough for the graduate nurse to transition into the role of a professional nurse. Although, the study showed that a tremendous amount of growth took place in the first six months, no graduate had mastered all 14-achievement indicators at the level of mastery. These graduates resembled the practioners that Benner (1984) refers to as advanced beginners. These are novice's nurses who have worked as professional nurses for six months or less and are "ones who can demonstrate marginally acceptable practice" (Benner, 1984, p. 22). This study lends support to Benner's work as only six out of the 14 nurses indicated

that they could demonstrate competence (Achievement Indicator 11) at the end of six months.

Ellerton and Gregor (2003) found at the three-month mark, that one did not get the sense that academic knowledge had yet made an impact on the graduate nurse's clinical practice. This study supports that finding by showing that at month four only three out of the 14 nurses could transfer nursing theory to clinical practice.

Gerrish (2000) found in a comparative study of newly qualified nurse's perceptions of their transition from graduate to professional nurse that delegation and leadership skills were problematic. Six months after post qualification, these nurses found delegating work to other members of the team especially difficult (Gerrish, 2000). This would appear to be comparable to this research, which indicated that only four nurses out of the 14 could delegate care at the six-month interval.

These same nurses also cited deficits in managerial and leadership skills according to Gerrish (2000). They found being in charge of a unit and having to manage the workforce and completing the administrative work caused considerable anxiety. Findings from this research showed only seven out of 14 nurses had mastered these leadership skills at the six-month timeframe. Similar deficits in management and organizational skills among newly qualified nurses were observed in the 1980's by Vaughan (1980) and Humphries (1987) and in more recent studies by Maben and Macleod Clark (1996b) and Runciman, Dewar and Goulbourine (1998).

Communication with patients and colleagues were identified by nurses from the United Kingdom as a source of stress (Maben & Macleod Clark, 1996a), Nurses who had been qualified for over seven months stated that breaking bad news to patients and

relatives was a particular source of conflict. Confronting doctors and other members of the staff was seen as a difficult part of their role (Maben & Macleod Clark, 1996a).

Collaborating with physicians and other healthcare workers provided problematic in this study as well. Only seven out of the 14 had mastered this skill at six-months.

The researcher believes that the data obtained from the 14-achievement indicators in this study clearly illustrate that a six-month orientation period does not adequately provide the time needed for a graduate nurse to transition to a professional nurse.

The study implies that graduate nurses may be viewed as novices or advanced beginners and should not be expected to practice beyond that level until they have had additional experience. Studies cited by Benner, Tanner and Cheslea (1996) showed that new graduates who were observed after six-months showed expectations at the advance beginner level rather than the competent or expert level. In the graduate nurses' transition to the professional role the appropriate amount of orientation time is essential in achieving positive outcomes for the newly qualified nurse.

2. Are there significant differences over time on the three time measurements (one, four and six months) on the 14-achievement indicators by graduate nurses?

Results of data obtained indicated that there was significant differences found between the first month and six month on all achievement indicators, however; mastery was not achieved on all 14 indicators. There was a 2% overall rate of mastery by the 14 graduates at the end of one month. At the end of four months there was an overall rate of mastery of 25% by the graduate nurses. By the end of six months the overall rate of mastery was 56%.

Conclusions

Findings outlined here have implications for deans of nursing, nursing department chairs, nursing faculty, boards of nursing and all those involved with developing and approving nursing curriculum because they will contribute to their knowledge of graduate nurse preparation. This study will assist them in making adjustments in their curricula in order to graduate more qualified, competent beginning nurses. This study will also be of value to nurse administrators, nurse managers, human resource directors, nurse educators, orientation coordinators and anyone who employs and trains nurses. These study results indicate that the establishment of an appropriate transition time for new nursing graduates is essential in achieving outcomes reflective of quality patient care. In addition organizations that allow nursing graduates adequate time for role transition should benefit by decrease turnover cost, lower vacancy rates, increased competence, job satisfaction, and nurse retention.

Results also indicated that the Outcome Engineering Tool may be useful in evaluating graduate nurse transition in regards to measuring nurse performance, defining role expectations and identifying the preparation necessary for the professional nurse. The tool can be easily replicated and can be completed electronically or manually by the graduate nurses. The tool also served as a guide in which the graduate nurses could benchmark their success and monitor their growth.

Recommendations

Conducting this study over a longer time frame would be beneficial in arriving at a more concise transition time. The study results indicate that six-months is not adequate; however, the study did not determine what amount of time is appropriate.

Continued monitoring and ongoing completion of the Outcome Engineering Tool at three-month intervals for a period of 24 months would allow researchers to establish a more definite transition period.

Expanding the study to include a larger sample size would allow more support for generalization of the findings. It would also add more support to the testing of this hypothesis.

Replicating this study in other institutions and broadening the geographical boundaries to include other parts of the United States would also allow for any biases that may exist in educational preparation of nurses. This study took place in central North Dakota with all participants graduating from colleges within the state with a bachelor's degree.

Enhancing the Outcome Engineering Tool to obtain qualitative information would allow graduate nurses to draw upon their feelings, attitudes, beliefs and experiences may give researchers more insight into the transition experience. Graduate nurses could have a comment section in which they could respond as to why they rated each achievement indicator as they did. This data could be reported anecdotally and coded into appropriate themes and categories.

In addition, each graduate nurse preceptor could also rate the graduate nurses on the 14-achievement indicators at the appropriate intervals. This would allow researchers to study the expectations and affirmations of both the advanced beginner (graduate nurse) and the expert (RN preceptor). Findings could enhance both educational and organizational preparation and orientation practices.

It is important, in the light of these recommendations, that the quest to expand and explore the area of role transition continue to be undertaken. Nursing administrators need to be sensitive to the needs of these novice nurses and hold realistic expectations of their abilities and perceptions in their new role. It is recognized that there will always be a transition period for graduate nurses; however further research needs to be conducted to support the novice nurse in determining what a realistic transition period should be.

APPENDIX

NEW JOURNAL SEGMENT

Primary Contributors to Progress:

- Education/orientation specialist
- Preceptor
- Executive partner
- Assistant Executive partner
- Resident Coordinator
- Other resident nurses

Legend:

a.	Observed others doing it
b.	Tried it once
c.	Tried it a few times
d.	Do it routinely
e.	Have reached mastery with it
f.	Can coach others to do it

Achievements

		a	b	c	d	e	f
1. I am able to perform and document assessments independently	none	<input type="checkbox"/>					
2. I am able to identify patient problems and potential complications using the Guidelines of Care	none	<input type="checkbox"/>					
3. I am able to evaluate the effects of care provided to patients	none	<input type="checkbox"/>					
4. I am able to plan and prioritize care for a group of assigned patients	none	<input type="checkbox"/>					
5. I am able to make independent decisions about patient care issues	none	<input type="checkbox"/>					
6. I am able to make assignments and delegate care	none	<input type="checkbox"/>					
7. I am able to collaborate with physicians, and interdisciplinary care providers.	none	<input type="checkbox"/>					
8. I am able to assume responsibility and accountability for my practice	none	<input type="checkbox"/>					
9. I am able to transfer nursing theory from my educational program to clinical practice	none	<input type="checkbox"/>					
10. I am able to advocate for patients on legal and ethical aspects of care	none	<input type="checkbox"/>					
11. I am able to demonstrate competence in providing quality, cost effective care	none	<input type="checkbox"/>					
12. I have been able to develop leadership skills	none	<input type="checkbox"/>					
13. I have formulated a plan for continued development of career goals	none	<input type="checkbox"/>					
14. I recognize the value of being part of a large health system and the opportunities it provides	none	<input type="checkbox"/>					

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