

NURSING STUDENT STRESS

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ABSTRACT

Nursing students experience multiple stressors as they are expected to apply theoretical learning and develop critical thinking skills while in the professional environment. Perceived overwhelming negative stressors can lead to absenteeism, job dissatisfaction, and a high employment turnover rate.

This research compared levels of stress between sophomore, junior and senior nursing students at a public university and a private college, utilizing the Student Nurse Stress Index (SNSI, Jones and Johnson, 1999) and the Nursing Student Demographic Survey. Summary scores from the SNSI suggest that private college students report higher levels of stress than public students in four main areas including: “exams and/or grades”, “amount of classwork to be learned”, “difficulty of classwork to be learned”, and “lack of free time”.

Key words: nursing student stress, college student stress, mature college student stress, student anxiety

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DEDICATION

I would like to dedicate my work to my family, especially my late husband, Harlan D. Kulland, and my daughters, Priscilla and Ashley. I am so very proud of both of you girls, and I have appreciated all of your encouragement. My husband felt I could do anything, and supported me in all of my educational endeavors. He encouraged me to change careers and become a nurse.

We both experienced nursing student stress with each degree, but also shared a sense of accomplishment when it was over. I struggled to complete this project after my husband's death.

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CHAPTER ONE: INTRODUCTION

Background

College presents a myriad of new experiences, and many of these experiences are stressful. Students simultaneously face academic challenges as well as family or social crises. Many balance irregular or extended workloads, have difficulty with time management, and may have fears over loss of financial scholarship support (Dopp & Parrish, 2007; Tansy & Roe, 2009). Other areas of concern for students include housing, being away from parents for the first time, attainment of personal goals, being overwhelmed with difficulties and loss of personal control (Feldt, 2008; Ahern & Norris, 2011).

The American College Health Association National College Health Assessment (ACHA, 2009, 2010) data revealed over one third of all postsecondary education students ranked stress as their highest health impediment, followed with sleep issues, depression, and anxiety. Of the 30,000 traditional students surveyed, 38.7% reported “moderate” stress, and 8.7% of the students reported “tremendous” stress. Additionally, 84% of the students felt overwhelmed, and 28% reported depression severe enough to limit their ability to function. The students also reported feeling exhausted (78%) and reported academic requirements were extremely difficult for them (42%). Stress and anxiety are often experienced as students meet goals for their developmental stage. The majority of nursing students, age 18-24 years old, are described as young adults, or emerging adults. Goals for this developmental stage include developing personal independence and self-sufficiency (Hockenberry & Wilson, 2011). Difficulty meeting these goals may lead to maladaptive coping, with symptoms of stress, anxiety and depression. Maladaptive coping, adaptive coping, life satisfaction, social status, living alone, religion, and class standing were evaluated by Mahmoud, Staten, Hall, and Lennie (2012) in young adult college students. Their

study recommended on-campus screening programs to increase student awareness, with an emphasis on students with maladaptive coping styles.

Problem

Professional job stress has been studied and identified often in occupations with high physical and psychological demands and low personal autonomy. Nursing is a typical example of a high stress occupation, as nurses must interact with other professionals frequently to perform required work (Decker & Shellenbarger, 2012). Although nursing students share many of the same stressors as qualified nurses, they are at the lowest level of the hierarchical ladder. They share responsibilities for the patient and family with the bedside nurse, charge nurse and clinical nursing instructor (Watson, Yanhua, Smith, Wong, & Deary, 2013).

The stress response occurs regardless of the stressor, whether physical, or psychological or both types of stress (Selye, 1974). Individual reactions to stress are not isolated events, but the outcome of previous experiences. Holistically the dynamic interaction of coping responses, personality, and social support all affect the stress response as student nurses are exposed to multiple challenging experiences during their academic career (Jimenez, Navia-Osorio, & Diaz, 2009).

Early research categorized symptoms of stress into three types. Physical response symptoms were primary, with increased heart rate, high blood pressure, headache, and ulcers as concerns (Selye, 1974). Psychological symptoms of anxiety, low self-respect and anger were noted (Gibbons, Dempster, & Moutray (2008, 2009a, & 2009b). Behavioral symptoms of smoking, drinking, weight changes and drug abuse were demonstrated in students with decreased coping mechanisms. Gibbons et al. (2008, 2009a & 2009b) defined nursing student stress predominately as psychological stress, as in dealing with a dying patient and the grieving family.

Additional areas of conflict for nurses noted by Por (2005) were dealing with role conflict, ambiguity and overload. Academically, exams have been identified as the most common stressor. Additionally, the timing of exams was a major concern, especially for the female students with children (Prymachuk & Richards, 2007).

Conflicts with physicians and inadequate emotional preparation for patients and families were reported as sources of stress. Difficult peer interactions occur, as do problems with supervisors. Interactions between multiple physicians and a student nurse is typical for each patient, often leading to difficult communication and lack of cohesiveness for a plan of care. Studies of first year student nurses have found high levels of stress occur often, and led to feelings of self-doubt, lowered self-esteem, inadequacy, irritability and depression (Christensson, Vaez, Dickman & Runeson, 2011; Gibbons et al. 2008, 2009a, & 2009b). The high levels of stress had depleted effective coping mechanisms.

Coping behavior is the continuous effort required to maintain a balanced state (Lazarus & Folkman, 1984), with stressors identified as positive, negative, or benign. Effective coping strategies promote the return to a balanced state, or eustress, therefore decreasing the negative effects of stress. Additionally, the effectiveness of coping strategies depends upon the situation. A coping strategy may be very effective in one situation, but totally ineffective in another situation. As students enter new learning situations, and encounter multiple new stressors, their stress levels often increase. Lazarus and Folkman (1984) reported an inverse relationship between stress and learning; learning potential declined as stress increased. Gibbon et al. (2008) and Edwards, Burnard, Bennet, and Hebden (2010) researched nursing students and suggested moderate amounts of stress or eustress, were beneficial for a healthy state and positive learning environment. However, excessive stress or distress created a negative impact on students'

physical and mental health, self-efficacy and academic success. Feelings of frustration, potential for failure, and lack of confidence continue to undermine academic performance in nursing students.

Significance to Nursing

Although student nurses experience many of the same stressors as other general students face, they also have stressors unique to their situation. The stress nursing students experience as clinical students extends into their professional lives. Research by Wu, Fox, Stokes and Adam (2012) found episodes of significant stress in newly graduated nurses. New nurses reported stress, especially when applying nursing skills appropriately during nursing cares, during interactions with hospital staff, and when using unfamiliar hospital equipment.

Nurse educators are ideally placed to assist students with managing their stress. The American Nurses Association (ANA) lists promotion of nurses' health, wellness and safety as a priority, as does the National Student Nurses Association (NSNA) (Trossman, 2013). Nursing students are coping with many challenges as they balance school and family life, performance anxiety and the fear of failure. Unfortunately, some nursing students utilize maladaptive coping methods to manage their stressors.

All nurses must build up their own resources so they can handle stress and maintain psychological well-being. Typically, baccalaureate students with the ability to manage their stress display greater self-confidence, increased motivation and improved academic performance (Goff, 2011). However, there is minimal research in this area. Recent studies by Gibbons et al (2008, 2009 a, 2009 b, and 2010) have demonstrated eustress or balance in promoting effective learning in nursing students, and noted the coping mechanisms which increase self-efficacy, control and support were most helpful. Stress may also enhance nursing performance in a

different setting. Research by Rella, Winwood and Lushington (2008) measured burnout and stress and found a significant portion of nursing students were dangerously fatigued when they graduated, and then entered the work environment without any time for recovery. Research of nursing student stress also showed memory, concentration and problem solving ability were affected, with the potential to progress to decreased learning, coping, academic performance and retention (Goff, 2011).

Purpose of Study

Past research has indicated all college students are vulnerable and experience stress. In addition to traditional academic stressors, nursing students experience clinical stress. Extremes of too much stress or too little stress may have a negative impact on a student's health. Ideally, students develop positive coping strategies, to maintain optimal balance between the two extremes.

Undergraduate nursing student stress is widely recognized, especially in the clinical setting. With frequent changes and challenges in health care and technology, the clinical setting has the potential to become even more stressful. Increasing numbers of nontraditional students are entering the nursing profession. Many of these adult students have work and life experiences unrelated to the nursing field. Often these same students must balance home, employment, and educational responsibilities. With the increase or change in responsibilities, the students face greater risks of maladaptive coping strategies. The lack of self-care in students may progress to burnout, depression or substance abuse. The purpose of this research is to assess three grade levels of nursing students' stress at one point in time during their course of study.

It is important for educators to recognize stressors students deal with on a daily basis. Many of the stressors students face in didactic and clinical areas cannot be changed, however, it is essential to recognize significantly stressful areas, and support students during these times of multiple transitions.

CHAPTER TWO: LITERATURE REVIEW AND FRAMEWORK

Literature Review

A literature search was performed using key terms of stress, college student stress, Millennials, mature college student stress, student nurse education, student nurse clinical education, nurse stress, nursing student anxiety, graduate nurse retention and burnout; with a focus on research in nursing student stress since 2009. Only articles in English were selected. Databases searched included CINAHL, Proquest, PubMed, and PsycInfo. Reference lists in all retrieved journal articles were reviewed. An additional list of search terms included middle range theory and transition theory. Review of middle range theories indicated Afaf Ibrahim Meleis and Eun-OkIm were highly regarded worldwide in their research and publications, with other nursing researchers also using Meleis' Transition Theory in broad areas of practice.

The literature review demonstrated changes over time in the areas of nursing student stress evaluated by researchers. Past researchers evaluated student nurses in regard to stress in the clinical setting and the developmental phase of the students (Beck & Srivastava, 1991). Stress in both novice and experienced nursing students was explored by Jimenez et al. (2009), revealing stress at similar levels from three grade levels. Beck and Srivastava (1991) noted lower stress scores in baccalaureate registered nurses, compared to pre-licensure students and attributed the lower perceived stress scores to maturity, previous experience, and better problem-solving and time management skills. Research studies with part-time nursing students noted students must be educated on the demands of the nursing program they are entering, particularly the workload.

Kenny, Kidd, Nankervis and Connell (2011) conducted a research study on mature age students. The study focused on steps educators could take to strengthen educational access for

mature students. The study included flexibility of class scheduling, clinical placement during school hours or on weekends, and financial support as stress reducing strategies. Older students entering the nursing profession often already have degrees in other fields, such as in psychology or biology. These students were academically successful and highly competitive. Research by Montgomery, Tansey and Roe (2009) found mature students entering the nursing field were highly desirable, especially as many of the students had previous experience working in the healthcare field. The mature students presented their own set of stressors. The most significant concern these students identified was financial stress, followed by the financial burden of childcare, from a financial perspective and time management. Weitzel and McCahon (2008) researched accelerated baccalaureate nursing students' stresses and supports, and reported nursing faculty have the ability to decrease potential stress. As expected, mature students reported the work load stressful, in addition to family responsibilities. Faculty can contribute to lower stress levels by decreasing time spent in classroom work groups. Often, mature students do not care for group class work, especially if they feel a classmate is not doing their share of the work, providing the potential of bringing down their grade (Weitzel and McCahon, 2008). Educators were encouraged to evaluate students' reading and written assignments following core curriculum learning objectives (Weitzel & McCahon, 2008). Family support, peer and faculty support, especially from nursing advisors, were reported as valuable by the students.

Clinical experience remains an integral component of nursing education. It provides nursing students with the opportunity to demonstrate physical competency, utilize critical thinking skills and incorporate didactic nursing theory under supervision of a clinical nursing instructor. Nursing students' initial clinical experiences may have significant effects on their basic nursing education and future studies.

Multiple researchers have concluded nursing students have increased stress or anxiety when they begin clinical work. Melincavage's (2011) research agreed with Smedley and Morey (2010) that a positive clinical atmosphere, provided by both staff and faculty, decreased student anxiety and increased self-esteem. Three main themes emerged from Nelwati and Plummer's research (2013) on nursing students' perceptions of stress in the clinical setting. Feelings of pressure were described as most stressful, and included preparing for clinical patients, lack of sleep, overlapping assignments, and timely submission of assignments to instructors. Challenging relationships was the second theme noted, and included interactions with patients and families, communication with clinical staff, co-operative peer work, and social relationships with families and the community. The use of coping strategies was the third theme of the study. Students described their response to a stressful situation, and what coping strategies they utilized to relieve the stress. Responses were both physiological and psychological. Sleep deprivation, altered appetite, and headaches were reported. Physiological responses to stress were noted as being upset, panic, anxiety, sadness, withdrawal, sensitivity, and mood changes. Students may be unaware of their perception to stressors, and may need assistance with coping strategies (Lazarus and Folkman, 1984).

Additional stress may come from a continually changing clinical environment. Students need some time to develop a working relationship with a new clinical advisor, settle into a new environment, become familiar with the routines and norms on the new clinical area, and become acquainted with friendly supportive floor staff to develop a sense of belonging (Levett-Jones, Lathlean, Higgins, & McMillan, 2007, 2009; Levitt-Jones & Lathlean, 2007, 2009). Unfortunately, hospital staff nurses are often part of nursing students' stress. Researchers (Hichberger, 2009; Thomas & Burk, 2009) found evidence of horizontal violence or hostility

from experienced nurses towards student nurses. Descriptive terms used by the students included words like sarcastic, patronizing, degrading, overbearing, and condescending. Hinchberger's (2009) research demonstrated violence was observed by student nurses. All of the student nurses who responded to the survey had either personally experienced violence or observed it. One-half of the violence was directed toward the students by staff, and verbal abuse was predominant (69%) followed by bullying (21%). Hathorn, Machtmes and Tillman's (2009) research agreed with previous studies, and added that poor treatment received by nursing students reduced the quality of care given to the patient. The word "anxiety" has also been substituted for "stress" by some researchers. Although of small sample size, research by Melincavage (2011) reported nursing students' self-reported anxiety increased significantly, especially when performing skills in the clinical area, along with a fear of being demeaned, exposed or abandoned. Students also sensed a competition among their clinical peers for the instructor's positive support. The study reported students experienced anxiety due to inexperienced faculty and staff, and noted demeaning remarks from both inexperienced floor staff and clinical instructors (Melincavage, 2011). Faculty recognized the need for consistent support for students, especially in the clinical setting.

Collaborative mentoring of medical students was recognized and encouraged by medical educators (Pololi, Knight, Dennis, & Frankel, 2002; Mayer, Files, Ko, & Blair, 2005). Li, Wang, Lin, & Lee (2010) and Frankel (2009) studied the effect of peer mentoring in an effort to help decrease stress and increase personal self-confidence in future students. Even with the small sample size of the Li et al. (2010) study, mentees expressed an increased sense of security when working with a peer mentor. Reeve, Shumaker, Yearwood, Crowell, & Riley (2012) focused their work on determination of adaptive coping mechanisms student nurses developed in stressful

situations. Positive, or adaptive coping mechanisms identified by students included a period of reflection, engagement in a physical activity, and the decision to persist and carry on with the program. Positive emotional focused coping and a social support system were described by students. Maladaptive coping included ignoring the stress, crying, irritability, isolation, and depression. Familiar coping strategies were utilized by students as they became new graduate nurses. In the past the transition time from nursing student to graduate registered nurse was approximately six months. Due to National Council Licensure Examination-Registered Nurse (NCLEX-RN) testing, the transition time now between nursing student and graduate nurse is very rapid, often a matter of days, decreasing the length of time for new nurses to become accustomed to their profession. Research showed between 18% and 50% of new nurses are leaving their positions in their first year of nursing practice. Stress and job dissatisfaction lead the list of reasons for their departure (Brewer, Kovner, Greene, & Tukov-Shuser, 2012; Kowalski & Cross, 2010).

As nurse educators we need to develop an awareness of possible student nurse stress and facilitate students' ability to cope effectively with new and challenging stressors. It may be beneficial to prepare students before a very stressful time in the nursing program. Research by Jimenez et al. (2009) reported on specific stressors, previously identified by former students and faculty. Students perceived the stress of the clinical setting more significant than academic stress. Although students from the three grades in the research reported similar levels of "moderate" stress, second year students reported the most somatic and psychic anxiety, while experienced students perceived more academic stress compared to first year clinical students.

Recommendations from the study include support and guidance from clinical instructors, faculty meetings with students to discuss stressful times in the program, and possible coping interventions for the students (Jimenez et al. 2009).

Research by Cap and Williams (2011) regarding holistic stress management for nursing students resulted in a holistic stress management class. College faculty developed the class for students, to help them find lifelong sustainable stress management techniques. The students were taught how to identify stressors in their lives, and the effect of the stressors upon both personal and academic life. Effective stress management skills and a health promotion project were part of the class (Capp & Williams, 2012).

Another source of stress for many students is the financial burden of obtaining an education (Stone & Feeg, 2013). National Student Nurses Association data (2012) revealed approximately 28% of all nursing students had no financial debt, while over 50% of nursing students had between \$5,000 and \$60,000 debt upon graduation. The students financed their education with financial aid loans, personal savings, parental support, scholarships and working while in school. Full or part-time employment was undertaken by 47% of the students, adding the stress of time management to their busy lives.

Unfortunately many new graduate nurses have already felt the stressors of the job market. Healthcare economic policy has created changes in the need for registered nurses. In 2012, conflicting reports from NSNA and the American Association of Colleges of Nursing (AACN) resulted in a secondary analysis of the data already collected. American Association of Colleges of Nursing (2012) reported nursing deans provided optimistic numbers for new hires, 88% for new bachelor degreed nurses, and 92% for master's prepared nurses, with regional variations. Four months post-graduation, the secondary analysis of NSNA members, also done in 2012,

revealed a significantly different view. The analysis revealed over one-third of the members had not found a nursing position, with up to 45% of the graduates in the West, and 40% in the Northeast still unemployed (Mancino, 2013). Research by Benson (2012) showed the increased number of newly educated nurses, along with the slowing demand for new nurses had changed the nursing shortage.

New nurses may also need a realistic view for gaining employment, as many of the open positions are in long-term care facilities and ambulatory care. Family financial demands often result in experienced registered nurses retaining their positions longer than expected, therefore affecting new job openings (Benson, 2012). Hospitals and clinics have been adjusting to the economy as they utilize lower paid medical assistants and decrease registered nursing hours. New graduates may find it difficult to obtain employment in the area of their choice, resulting in job dissatisfaction and attrition. Nursing educators are encouraged to assist students with recognizing their own needs for growth in coping strategies and stress management, as inability to deal with the stress of the changing healthcare industry may well cause their departure from the nursing field.

A nurse who has maintained a successful balance of life's stressors as a nursing student has already started the practice of self-awareness and self-care, thus decreasing the risk of burnout or other stress-related symptoms (Clark & Pelicci, 2011). The nursing profession is seeing increasing numbers of motivated nurses who are interested in increasing their knowledge, at a significant price to themselves. The price is stress, with nurses struggling to create a balanced state between work, study and home. National changes in healthcare, combined with the aging population in the United States should push both medical care facilities and educational institutions to support and retain healthy nurses. Clarification and identification of sources of

stress for student nurses during stressful transitions will result in personal benefits as well as organizational retention of registered nurses. Organizational retention of experienced registered nurses will positively impact patient care. The study of stress in nursing students continues to play an important role in nursing education. The purpose of this research study is an evaluation of three grades of nursing students and to consider the implications for nursing education and practice.

Theoretical Framework

The theoretical framework for this study is Meleis's Transition Theory (Chick & Meleis, 1986; Schumacher & Meleis, 1994; Meleis, Sawyer, Im, Schumacher & Messias, 2000). Original work on transitions began over 30 years ago, with Meleis's role insufficiency theory (Meleis, 1975) and continued with multiple researchers until 1986 when Chick and Meleis conceptualized transition theory. Meleis' former students continued the process, investigating diverse populations and various transitions, resulting in situation-specific theories based on transitions theory. A literature review by Karen Schumacher reported over 300 articles on transition used as a concept or framework in nursing, leading to Schumacher and Meleis' transition framework (1994), which progressed to a middle range theory. Researchers continued to work with the theory, and a group effort was undertaken to analyze findings, and identify similarities/differences in transition. The collective work by Meleis, Sawyer, Im, Schumacher, and Messias was published in 2000. A literature review on transitions theory was published by Im (2010) to assist researchers with information for future theory development. Meleis described the commonality nursing students experience during the transitional period of their education, and the transition to a new role as a registered nurse (Meleis, et al. 2000). Transition theory has been widely used in nursing education.

Transition Theory Concepts

Transition theory presents five concepts (Meleis et al., 2000) and includes:

1. Types and patterns of transitions
2. Properties of transitions
3. Transition conditions
4. Patterns of response/process and outcome indicators
5. Nursing therapeutics

Types of transitions. The four types of transitions include health/illness transitions, developmental transitions, situational transitions, and organizational transitions (Im, 2013). Health and illness transitions are events of significant medical change in the individual's life. Giving birth, a hospital admission/discharge, or diagnosis of a chronic medical illness or cancer are examples of health/illness transitions.

Developmental transitions involve the developmental process of growth and maturity throughout the life cycle. These transitions include infancy, adolescence, young adulthood, menopause, aging, and death. In the United States adolescence lasts from age 11 or 12 until the late teens or early twenties. Usually this is a relatively healthy time of life for many, but health problems occurring during this time are often associated with poverty or a risk-taking lifestyle (Hockenberry & Wilson, 2011). Many individuals in this age range often do not get enough sleep. The incidence of depression, especially in females, increases for the adolescent group.

Situational transitions are described as changes in life circumstances (Im, 2013). These changes usually occur suddenly, and consist of events such as motor vehicle trauma, a heart attack, or sudden widowhood. Entering an educational program, immigration, or moving from an independent home environment to a nursing home are situational transitions.

Organizational transitions typically involve leadership or administration. It may involve a nurse changing departments within an institution, such as pediatrics to intensive care; or transitioning from hospital staff to public health community nursing (Meleis, 1997). Typically transitions, or changing events, involve a change in role or relationship and expectations.

Types of transition for students. Nursing students experience both developmental and situational transitions. Many of the students are adolescents, and are beginning the young adult phase of their lives. They are also students, involved in the transition of independent living, starting their college education, and progressing toward their goal of becoming a registered nurse. Additional significant changes occur in situational transitions, such as incorporation and application of student knowledge, and the experiences of role changes within nursing.

Organizational transitions occur more frequently with registered nurses, demonstrated when changes in practice occur, from staff nurse to charge nurse, or transfer to an entirely new health care specialty. However, clinical experiences for nursing students involve a variety of environments. Pediatric nursing students spend brief periods of their clinical training at a day care, a coordinated treatment center for children, an acute neonatal care unit, and both a general pediatric floor and pediatric intensive care.

Patterns of transitions. Patterns of transitions involve multiplicity and complexity (Meleis et al., 2000). Multiple transitions occur frequently and simultaneously. Some transitions may be sequential, and often there are degrees of overlap. It may be difficult to determine final end points of some transitions.

Patterns of transitions for students. Patterns of transitions for nursing students may include independent living for the first time in their lives and may include social role changes (such as boyfriend, girlfriend, husband, wife, mother or father). Becoming a college student

requires time management, and often a new and evolving set of peer relationships to explore and maintain. Many nursing students must continue working, either part-time, or full time. Other students may need to seek new employment opportunities. Health care institutions are motivated to employ nursing students, as the students are receiving health care education, which provides safer, more professional care for their patients.

Properties of transitions. Schumacher and Meleis (1994) reported conditions that influence transitions vary among individuals. These conditions included: 1) level of knowledge, 2) available new knowledge, 3) immediate resources available, 4) capacity to plan, 5) expectation of events, 6) meanings of change individuals have, and 7) emotional and physical well-being. Further work on transition theory clarified the properties more succinctly (Meleis et al., 2000). The properties of the transition experience are interrelated and include awareness, engagement, change and difference, time span, and critical points and events.

Awareness occurs when an individual perceives and recognizes a transition experience, although the transition process may precede actual awareness (Meleis et al., 2000). Engagement occurs as a result of awareness. Engagement is demonstrated by the level of active participation in the transition event (Meleis et al, 2000).

Changes and differences are also properties of transition (Meleis et al., 2000) and are described as the cause and effect of transition. Although changes in identity, role, relationship, ability, and behavior all result in activity in internal and external processes, not all change results in transition (Schumacher & Meleis, 1994). Differences are unsatisfied or atypical expectations. An individual may attempt to adopt new behaviors, but remain unsuccessful, while attempting necessary role changes.

In the transition experience time span refers to a period of time beginning with anticipation, perception, movement through an unstable period, and finishing with either another new beginning, or a period of stability (Meleis et al., 2000). All transitions are described as moving over time, with demonstrated change in activity or behavior. Meleis et al. (2000) reported some transitions do not have defined beginnings or endings.

The last property of the transition experience includes critical points and events. Critical points and events are described as significant episodes, or markers, defined by increased awareness and/or anxiety (Meleis et al., 2000). Awareness of the changes results in a sense of comfort and acceptance in the new lifestyle, competent behaviors, or work environment. According to Transition Theory, a sense of stability in the new skills or routines occurs in final critical points and events.

Properties of transitions for students. Nursing students may not recognize all the transitions they are facing as they begin their nursing education. Involvement in the process of transition is defined as engagement. The degree of commitment to the nursing program must be high, as a specific grade point average must be met even before entry into the nursing program. An engaged student recognizes a commitment to studying, and completing didactic assignments rather than partying. An engaged senior nursing student has undoubtedly already selected the specific field of nursing he or she wants to pursue. Nursing students will proceed through multiple overlapping cycles of change as they engage in the process to become registered nurses. They may look forward to starting classes, clinical experiences, and becoming part of a new peer group. They may experience confusion in some areas, which may well increase to feelings of distress before mastering the requirements. The confusion may be from dissatisfaction with grades, the clinical experience, or from their peers. Students simultaneously experience cycles in

their social lives, including anticipation (or disappointment) regarding an engagement, marriage, or the birth of a baby. Most nursing students are excited by the prospect of finishing school, typically a four year period of their life they recognize as a transition. They anticipate beginning a new stage of their life after graduation.

The time span of a nursing career will follow a pattern of preparation, including testing, job interviews, and adjustment at work. Multiple factors, such as individual attitude and involvement, past work experience, length of orientation program, preceptor or mentor involvement, work environment, peer and managerial support all affect the length of time needed as a graduate nurse transitions from advanced beginner to competent registered nurse (Benner, 2000). Three of the most significant critical points and events in a student's life are acceptance into the nursing program, passing the licensure exam, and accepting employment as a registered nurse. Individuals have other milestones they interpret as critical points in their lives, particularly when they have finally mastered a complex skill required in nursing practice.

Transition conditions. Transient conditions is the third concept of this theory. Transient conditions are circumstances that influence the way an individual moves through a transition, either facilitating or hindering progress toward a healthy transition (Schumacher & Meleis, 1994). These conditions are the personal, community, or societal factors which facilitate or inhibit the transition processes and outcomes.

Personal conditions are meanings, cultural beliefs and attitudes, socioeconomic status, preparation and knowledge (Meleis et al., 2000). Meanings are personalized for each individual, and are one's interpretation of the event or situation. The process of the transition may either facilitate or hinder healthy transitions (Meleis et al., 2000). Cultural beliefs influence the transitional experience, such as the stigmatization of cancer by Chinese people. Socioeconomic

factors are also an influence. For example, an individual may not have the financial resources to pay for bus fare, or even take the time off from work to go to physical therapy sessions.

Anticipatory preparation may well improve a transitional experience, just as lack of preparation may inhibit the experience.

Community conditions may be described as community resources. Less research has been done in this area, compared to personal conditions. Obviously, small communities would have significantly less medical and nursing care available for the area. For example, after discharge from an acute care hospital, patients would have a difficult time receiving outpatient physical therapy in a small community, thus creating the need for placement in a nursing home bed for rehabilitation.

Both community conditions and societal conditions may either facilitate or inhibit the transition process. This area of Meleis's theory has also been underdeveloped. The marginalization of immigrants in the host country was portrayed as an example of societal conditions impacting the transition process (Meleis et al., 2000; Im, 2010).

Transient conditions effects on students. Family, friends, and the community play a significant role in a student's desire to continue his or her education beyond a high school diploma (Ahern & Norris, 2011). Family culture may value higher education, and set a standard of expectations for the children. The expectations may well include encouragement and assistance with applications for college entry, and financial support (Stone & Feeg, 2013). Students may also have little support from family, but may have strong social support from friends (Kenny, Kidd, Nankervis & Connell, 2011). Similarly, advocates of education in the community will support the school system. Unfortunately, in today's economy many families are financially unable to support their child's educational expenses. Most students rely on a

combination of means to pay for college, including savings, scholarships, family gifts, and employment, either part-time or full time (Stone & Feeg, 2013). Communities with college campuses usually are supportive of the students. Businesses encourage student purchases, and welcome student involvement. Several nursing students reported to this researcher that they had helped with sandbagging during spring flooding of the Red River. However, there may also be some dissatisfaction with students regarding loud parties and inappropriate behavior in residential areas, which may create problems for students looking for off campus housing.

Patterns of response/ process and outcome indicators. Patterns of response or process and outcome indicators originally were identified as indicators of healthy transitions in the framework theory (Schumacher & Meleis, 1994). By evaluating process and outcome indicators nurses are able to determine if an individual's responses are geared toward recovery and healthy living or vulnerability and risk. However, Meleis et al. (2000) reported against evaluation of outcome indicators too soon in a transition process, as the need to feel and stay connected increases confidence. Mastery of new skills and behaviors demonstrates increased confidence. Additional positive indicators include appropriate transition regarding time, space and relationships. Nurses' interaction with patients, families, peers and staff will identify and clarify the meaning of the transition and the behavioral responses, encouraging a healthy transition.

Patterns of response related to students. Evaluation of didactic learning involves frequent testing of core nursing classes. Instructors follow and evaluate a student's grades to determine if there is a learning need, and how the need should be addressed. The clinical setting provides opportunities to simultaneously evaluate both didactic knowledge and clinical skills. Clinical skills are evaluated and mastered in a laboratory setting before the student sees patients. Clinical instructors continue the evaluation during each clinical interaction, with the goal of

assessing increasing mastery of skills each semester. Staff nurses working with the students also observe students during patient/family interactions, and offer feedback to both the student and the clinical instructor. Self-confidence and skills are expected to progress from the novice beginner to graduate nurse (Benner, 2000).

Nursing therapeutics. Nursing therapeutics is the fifth and final concept of this theory. Three nursing measures for therapeutic interventions were proposed for use during transitions. These measures included assessment of readiness, preparation of transition and role supplementation (Schumacher & Meleis, 1994).

Assessment of readiness required a multidisciplinary approach and involved a thorough understanding of the individual, including an evaluation and interpretation of the patterns of transition experience. With the second measure, the preparation for transition, the focus for nursing education was to produce the best condition/situation for the individual. Role supplementation, the final nursing measure, was introduced in 1975 by Meleis. Role supplementation has been used by researchers in the past. No further development of nursing therapeutic measures has been done in the theory of transitions.

Relationship of nursing therapeutics on nursing students. Assessment of readiness of the nursing students at both the private college and public university nursing programs begins with a mandatory grade point requirement, preliminary college classes, and an interview before acceptance into the academic nursing program. After entering the program, both didactic and clinical instructors perform frequent evaluations to determine whether students are mastering required knowledge and skills. The preparation for transition continues each semester, as students continue to expand their knowledge base with core nursing curriculum. The summer before their senior year students have the opportunity to apply for nurse intern positions, and pair

with a registered nurse to provide care for patients. Final exams each semester and practice NCLEX- RN testing are additional tools for evaluating readiness for graduation.

Conceptual and Operational Definitions

Student nurse stress. Conceptually, student nurse stress is the result of disparity or difference between a student nurse's perception of his/her role and what the student is actually performing in the role. Operationally, student nurse stress was demonstrated by the sum of each student's scores in the four subtotal categories on the Student Nurse Stress Index (SNSI) developed by Jones and Johnston (1999), and total scores ranged between a low of 22 (not stressed) and a high of 110 (extremely stressed).

Distressed student. Conceptually, a distressed student is a student who is having difficulty in either performance or awareness in the new role. A student unable to master core nursing curriculum, the inability to demonstrate required clinical skills, or utilizing socially unacceptable coping mechanisms would be examples of a distressed student. Operationally, a distressed student scored significantly higher scores on the SNSI subscores, compared to a non-distressed student.

Non-distressed student. Conceptually, a non-distressed student is defined as demonstrating a successful progression to a new role or identity, including mastering skills and behaviors required for the new role (Meleis et al., 2000). Although some stress (or distress) is normal, nursing students demonstrate their ability to deal with stress appropriately as they acquire required knowledge and skills following their pathway through the nursing program. Operationally, a non-stressed student reported significantly lower scores on the SNSI subscore groups, compared to a distressed student.

Academic load. Conceptually, academic load is the first of four underlying variables in the SNSI. Academic load evaluates the student's perception of stress; covering didactic information, peers, attitudes, free time, and health/personal relationships of the student with their own family. Operationally, academic load was demonstrated by each student's score on this subtotal category.

Clinical concerns. Conceptually, clinical concerns is the second factor of the underlying variables of the SNSI. Clinical concerns deals with the student's perception of the clinical environment, including student responsibilities, uncertain expectations, client attitudes toward both the student and the nursing profession, general atmosphere and relationships with the floor staff. Operationally, clinical concerns was demonstrated by each student's score on this subtotal category.

Personal problems. Conceptually, personal problems is the third factor of the subset variables in the SNSI. The area of personal problems deals with the student's perception of stress in their own personal problems/health issues, and the health/relationships of other family members. Operationally, personal problems will be demonstrated by each student's score on this subtotal category.

Interface worries. Conceptually, interface worries is the final factor of the SNSI subset of variables. This area deals with the student's perception of stress regarding peer competition, attitudes of other professionals towards nursing, lack of free and family time, college response to student needs, and lack of timely performance feedback. Operationally, interface worries was also demonstrated by each student's score on this subtotal category.

The word transition was both a noun and a verb in this research. As a verb, student nurses' role transition involved person, health and environment. With facilitative support student

nurses demonstrated positive responses as they mastered the skills required in their new role.

Used as a noun, the major definitions or concepts of Transition Theory were described in detail previously in this paper in “Theory Concepts”. These included: types and patterns of transitions, properties of transition experiences, transition conditions, patterns of response/process and outcome indicators, and nursing therapeutics (Meleis et al., 2000).

Major Assumptions

Major assumptions in this research project were: 1) Stress is present in all nursing students’ lives; 2) Prolonged stress may lead to unhealthy coping (or transitions) in students’ academic careers; 3) Stressful transitions are complex, overlapping, and progress over time; 4) Stressful transitions create changes in identity, role, relationships and abilities; 5) Stress is perceived differently by each nursing student. 6) The goal for all students is to successfully balance the stressors of student life, and sustain (or develop) healthy coping strategies.

CHAPTER THREE: METHODOLOGY

Tools

This is a descriptive, comparative research study. The study design was utilized to assess students' level of stress, so nursing educators may gain additional insight regarding stressful events experienced by nursing students, while they are pursuing their education. The study assessed three grade levels in two schools, sophomores, juniors, and seniors, at one point in their education, to determine particularly stressful areas for the students. No intervention was made to control or manipulate the environment.

The Student Nurse Stress Index (SNSI) was developed in 1999 by Jones and Johnston. It is a 22 question, self-reporting tool, designed to assess four areas previously recognized as stressful for nursing students. A Likert scale was used to rate responses, from rating 1, meaning not stressful, to rating 5, meaning very stressful. The SNSI is scored on a continuum, from not stressful (22) to extremely stressful (110), with no distinct cut off values for mid-range scores. The questionnaire demonstrated cross-sample factor congruence with good internal consistency, with Cronbach's alpha >0.70 for all factors. Concurrent validity of the SNSI (Jones & Johnston, 1999) with previously tested tools demonstrated correlations ($p < 0.001$), with strong test-retest reliability (Gibbons, Dempster & Moutray, 2009). Written permission was obtained from Jones for use of this tool (see Appendix A).

The Nursing Student Demographic Survey (NSDS) was based on a nursing student demographic survey tool developed by Baker (2012) as part of her nursing thesis work. Written permission was obtained from Baker to use/adapt the tool for this research study (see Appendix D). The NSDS is an 11 question self-reporting tool.

Setting and Sample

Two schools in the upper Midwest, both offering Bachelor of Science in nursing degrees, were selected for this study. The private college had 95 students, and the public university had 180 students. Sophomore, junior and senior students enrolled fulltime in the nursing programs were invited to participate, and were asked to complete the NSDS and the SNSI. The three classes were selected to assess for change from novice students to experienced students. Students from both sites have similarities in developmental stage and their educational based activities (didactic and clinical experiences).

Data Collection

The data were collected at the end of Spring Semester (April and May), 2014. Each grade level in both schools was surveyed separately in their classroom. Hard copy surveys were utilized to increase student participation and survey data return. The private college had 95 total nursing students, and the public university had 180 students, for a total of 275 participants.

Participation was voluntary and anonymous. Response rate was 100%, however, there were several missing responses (26 single unanswered questions, and one student omitted 11 questions, or one entire page of the survey). Raw data were utilized. Any unanswered questions were omitted in the data. Three nursing instructors at each school gave consent for survey administration in advance and had given verbal permission for the survey to be done in the last 15 minutes of their classes. Following Institutional Review Board (IRB) approval (see Appendix G), a brief explanation of the survey was made by this researcher, and hard copy surveys were distributed to the students. The first page of the survey was a consent form (see Appendix F for Student Participation Consent). The consent included a brief explanation of the purpose of the study, possible risks to students, and contact information for the primary researcher. Consent was

given by the student reading through the consent form and beginning the survey. After students completed the surveys, the surveys were placed into a locked box for which only this researcher has the combination. The majority of students completed the survey questionnaires in five minutes or less. There were three questions raised by students, all three asked for clarification of a question on the NSDS. All students completed the process in less than eight minutes.

Data Analysis Plan

Jones and Johnston's SNSI (1999), (Appendix B for Jones Scoring Instrument, and Appendix C for Student Nurse Stress Index) was administered and scored as directed by the authors. The four subscales measured included the dependent variable, stressors, with questions regarding academic load (seven questions), clinical concerns (seven questions), personal problems (four questions) and interface worries (seven questions). Three questions were used in two different categories. Responses were rated on a Likert scale ranging from 1 (not stressful) to 5 (extremely stressful). The 22 questions provided the sum total score. The lowest score possible was 22, indicating a non-distressed student, ranging to a high of 110 (indicating a very distressed student). Analysis was computed for each subscale score. Data analysis was computed with SPSS software for Windows (Statistical Package for the Social Sciences, version 22).

Descriptive variables were computed for each of the SNSI subscales (Jones & Johnson, 1999) both schools, and for each grade level. Analysis of the SNSI (Jones & Johnston, 1999) included Cronbach's alpha, with the level of significance set at $p < .05$. ANOVA calculations were also computed to discover significant differences between the schools.

The Nursing Student Demographic Survey (Baker, 2012, see Appendix E for the Nursing Student Demographic Tool) was utilized to assess additional possible areas of stress. Demographic variables on the survey were analyzed using frequencies to determine the

distribution of students in each of the following variables: gender, age, GPA, living arrangements, childcare, employment, race/ethnicity, study time, class time, clinical time, and sleep. The mean, median, and mode were evaluated for each of the 11 questions. Grade levels were compared within schools (sophomores, juniors and seniors), grade levels between schools (sophomores to sophomores, juniors to juniors, and seniors to seniors), then both total private and public university students were compared to each other.

Measures to Protect Human Subjects

North Dakota State University requires all research activities involving human subjects comply with the Federal Policy for Protection of Human Subjects (United States Department of Health & Human Services, 45CFR46). The policy states research activities that intervene in people's lives, observe human behavior, or use data obtained directly or indirectly from living individuals must be reviewed and approved by an IRB to ensure that risks have been minimized and are reasonable in relation to anticipated benefits. IRB approval was obtained from both schools before the study was conducted, with NDSU as the primary IRB. Informed consent was obtained from the participants as they read the consent and began the survey (see Appendix G for IRB consent). Researchers maintained the privacy and safety of the participants.

This researcher was not connected to the students in any manner. Permission from the nursing instructors was granted in advance and the instructors were asked to leave the room before the survey started. The survey consisted of a printed consent form, with contact information for the researchers. Instructions in the consent asked the students to stop taking the survey if they felt distressed, and contact information was provided if the student felt he/she required supportive care. No names or identifiers were used on the survey sheets. All surveys were placed in a locked box by the researcher, which was handled only by the researcher until

the research project was completed. When all analyses were completed the surveys were destroyed in a confidential manner.

Research Questions

The following research questions were examined:

1. What are the most stressful areas for each grade level of both schools (sophomore, junior and senior), according to the SNSI (Jones & Johnston, 1999)?
2. What stressors were perceived by nursing students in the public university and in the private college?

CHAPTER FOUR: DATA ANALYSIS

Analysis of Nursing Student Demographic Survey

There were 275 participants (95 private college students and 180 public college students). As expected in the nursing profession, there were 233 women (84.5%) compared to 43 men (15.6%). Age range for the majority of participants was between 18-21 years for 136 participants (49.3%) and between 22-25 years for 118 participants (42.8%). Three age groups had minimal students. The 26-29 year old group had seven (2.5%) participants, the 30-33 year old group had six (2.2%) participants, and nine participants (3.3%) were 34 years of age or older.

Consistent with mandatory college minimum GPA requirements, scores were high, with 253 participants (91.7%) in the 3.0-3.99 range. Sixteen participants (5.8%) reported a GPA of 4.0. There were minimal participants with low GPA's. Only six participants (2.2%) reported a GPA of 2.99 or less.

Dormitory living, alone or with roommate(s) was reported by 181 participants (65.6%). Living alone was reported by 24 participants (8.7%). Forty participants (14.5%) reported living with a spouse or significant other. An additional nine participants (3.3%) lived with a spouse, significant other and children. Only four participants (1.4%) reported they lived with just children. With the small number of participants living with children, 15 (5.4%) reported they were responsible for arranging or providing child care. The remaining 255 students (92.4%) reported they did not have any childcare responsibilities. Survey data revealed six students omitted this question.

Working while in school is very common for college students. At the time of the survey, 89 participants (32.2%) reported they were unemployed. Part-time employment, between 10 and 20 hours per week, was reported by 93 participants (33.7%). Twenty-one participants (7.6%)

reported working between 21 and 30 hours per week. Four participants (1.4%) reported working between 31 and 40 hours per week, and only one participant (.4%) reported working over 40 hours per week.

Five participants omitted the race/ethnicity question. Participants reported White as the predominant group, by 254 participants (92%). A total of 17 participants (6.2%) reported ethnicity in three minorities. Nine participants (3.3%) reported Black/African American ethnicity, six (2.2%) reported Asian, and two participants (.7%) reported Hispanic ethnicity.

During the data collection, two participants asked for clarification regarding the number of hours of studying done per day. Both of the participants stated they did not study every day. This researcher asked them to total the number of hours they study in a week, and divide by seven, for a daily average. One participant omitted this question. The majority of participants studied between 3-4 hours per day, 159 participants (57.6%). Forty-three (15.6%) studied two hours or less per day, and slightly more students 52 (18.8%) studied for 5-6 hours per day. Twenty one participants (7.6%) reported studying seven hours per day.

The demographic survey asked the participants two questions regarding classroom attendance, dividing the time into didactic lecture classes and clinical experiences (including senior student clinical). Sixty-eight (24.6%) of the participants reported they spent less than 10 hours in didactic lecture per week. Most of the participants, 109 (39.5%) reported they spent 11-15 hours in didactic lecture, 55 (19.9%) reported 16-20 hours, and 21 participants (7.6%) reported 21-25 hours in lecture per week. Only 22 participants (8%) reported spending 26 or more hours in didactic lecture per week. Two thirds of the participants (183) spent 10 hours or less per week in the clinical area. Thirty nine students (14.1%) reported spending 11-15 hours per week, 13 participants (4.7%) reported 16-20 hours, and 11 participants (4.0%) reported 21-25

hours in the clinical area weekly. Twenty six participants (9.8%) reported spending 26 hours or more per week in the clinical area. Three participants omitted this question.

The final question on the demographic survey asked about sleep. Nine participants (3.3%) reported they slept less than four hours per night. The vast majority of participants, 215 (77.9%) reported they slept between five and seven hours per night. Fifty-one participants (18.5%) reported sleeping eight to ten hours per night, and one participant (.4%) reported 11 or more hours of sleep per night.

Analysis of the SSNI

The second survey tool used in this study was the Student Nurse Stress Index (Jones & Johnson, 1999). The four subscale categories were analyzed for perceived student stress. All of the questions in the subscale category of Interface Worries were reported as having significant differences, indicating increased stressors. The questions in the subscale dealt with “peer competition”, “attitudes and expectations of other professionals towards nursing”, “lack of free time”, “college or school response to student needs”, “lack of timely feedback about performance”, “no time for entertainment”, and “not enough time for family”. The private college students reported significantly more stress ($M=24.20$, $SD=4.82$) compared to the public college students ($M=21.23$, $SD=4.69$). See Table 1 for a comparison of total students of both colleges.

Table 1. Comparison of Private and Public College Students on Subscale Stress Categories

Subscale Categories	Students	N	<i>M</i>	<i>SD</i>	P value
Academic Load	Private	93	24.51	4.68	.042
	Public	179	23.46	3.64	
	Total	272	23.82	4.05	
Clinical Concerns	Private	94	19.05	5.18	.008
	Public	180	17.47	4.35	
	Total	274	18.01	4.70	
Personal Problems	Private	94	10.90	3.54	.003
	Public	179	9.63	3.26	
	Total	273	10.06	3.41	
Interface Worries	Private	94	24.20	4.82	.003
	Public	179	21.23	4.69	
	Total	273	22.25	4.93	

Note. The four subscale categories were compiled by adding specific survey items as follows: Academic Load (1, 2, 8, 14, 18, and 20), Clinical Concerns (13, 14, 16, 17, 18, 19, and 20), Personal Problems (9, 10, 11, and 12), and Interface Worries (4, 5, 6, 8, 14, 18, and 20).

The sophomore, junior, and senior grades of both colleges were analyzed in the same manner. There were no significant differences in stress reported in the sophomore students. See Table 2 for a comparison of the sophomore students of both colleges.

Table 2. Comparison of Private and Public College Sophomores on Subscale Stress Categories

Subscale Categories	Students	N	<i>M</i>	<i>SD</i>	P value
Academic Load	Private	27	24.40	3.59	.883
	Public	59	24.52	3.34	
	Total	86	24.48	3.40	
Clinical Concerns	Private	28	17.42	4.90	.996
	Public	60	17.43	3.93	
	Total	88	17.43	4.23	
Personal Problems	Private	29	9.44	3.26	.894
	Public	60	9.35	3.23	
	Total	89	9.38	3.22	
Interface Worries	Private	28	23.17	5.12	.128
	Public	60	21.65	3.94	
	Total	88	22.13	4.38	

Note. The four subscale categories were compiled by adding specific survey items as follows: Academic Load (1, 2, 8, 14, 18, and 20), Clinical Concerns (13, 14, 16, 17, 18, 19, and 20), Personal Problems (9, 10, 11, and 12), and Interface Worries (4, 5, 6, 8, 14, 18, and 20).

The junior grades showed the most differences in significant stressors between the two schools. All p values were significant at the .05 level. Once again, the subcategory of Interface Worries led, with private students ($M = 25.63$, $SD = 4.29$), compared to public students ($M = 21.44$, $SD = 4.44$). The subscale category of Academic Load followed, with private students ($M = 26.18$, $SD = 4.39$) compared to the public students ($M = 22.88$, $SD = 3.75$). Academic Load questions covered the “amount and difficulty of classwork material to be learned”, “examinations and/or grades”, “too much responsibility”, “atmosphere created by teaching staff”, and being “unsure of expectations”. The subscale category of Clinical Concerns reported by private students ($M = 20.75$, $SD = 5.29$) indicated more significant stressors compared to the public students ($M = 18.35$, $SD = 4.86$). This category consisted of questions regarding “relations with other professionals”, and the “client’s attitudes toward both the nursing student and the nursing profession”. Three questions from Academic Load are repeated in this subscale, including “too much responsibility”, being “unsure of expectations”, and “atmosphere created by teaching staff”.

The subscale of Personal Problems also revealed significantly higher scores in the private students ($M = 12.12$, $SD = 3.73$), compared to the public students ($M=10.43$, $SD=3.27$). Questions from the Personal Health subscale include “actual personal health problems”, “physical health of other family members”, “relationships with peers”, and “other personal problems”. See Table III for a comparison of both colleges’ junior students.

Table 3. Comparison of Private and Public College Juniors on Subscale Stress Categories

Subscale Categories	Students	N	<i>M</i>	<i>SD</i>	P value
Academic Load	Private	33	26.18	4.39	.000
	Public	62	22.88	3.75	
	Total	95	24.03	4.26	
Clinical Concerns	Private	33	20.75	5.29	.029
	Public	62	18.35	4.86	
	Total	95	19.19	5.12	
Personal Problems	Private	32	12.12	3.73	.027
	Public	62	10.43	3.29	
	Total	94	11.01	3.52	
Interface Worries	Private	33	25.63	4.29	.000
	Public	61	21.44	4.44	
	Total	94	22.91	4.80	

Note. The four subscale categories were compiled by adding specific survey items as follows: Academic Load (1, 2, 8, 14, 18, and 20), Clinical Concerns (13, 14, 16, 17, 18, 19, and 20), Personal Problems (9, 10, 11, and 12), and Interface Worries (4, 5, 6, 8, 14, 18, and 20).

Table 4. Comparison of Private and Public College Seniors on Subscale Stress Categories

Subscale Categories	Students	N	<i>M</i>	<i>SD</i>	P value
Academic Load	Private	33	22.93	5.27	.949
	Public	58	23.00	3.64	
	Total	91	24.03	4.26	
Clinical Concerns	Private	33	18.72	4.92	.028
	Public	58	16.58	4.05	
	Total	91	17.36	4.48	
Personal Problems	Private	33	11.00	3.19	.006
	Public	57	9.05	3.14	
	Total	90	9.76	3.28	
Interface Worries	Private	33	23.63	4.87	.010
	Public	58	20.58	5.58	
	Total	91	21.69	5.51	

Note. The four subscale categories were compiled by adding specific survey items as follows: Academic Load (1, 2, 8, 14, 18, and 20), Clinical Concerns (13, 14, 16, 17, 18, 19, and 20), Personal Problems (9, 10, 11, and 12), and Interface Worries (4, 5, 6, 8, 14, 18, and 20).

The senior grades also reported significant differences between the two colleges, in three of the subscale categories. These categories included Interface Worries, Clinical Concerns, and Personal Problems. Interface Worries led this category with significantly higher scores reported by the private students ($M=23.63$, $SD= 4.87$) compared to the public school seniors ($M = 20.58$, $SD =5.58$). Clinical Concerns was the next subcategory, with private students more stressed ($M = 18.72$, $SD = 4.92$), compared to the public seniors ($M = 16.58$, $SD = 4.05$). ($M = 11.00$, $SD = 3.19$), than the public seniors ($M = 9.05$, $SD = 3.14$). As with the junior students, the subscale of Personal Problems was perceived as least stressful of the four subcategories, with private seniors

reporting more significant stressors. See Table IV for a comparison of both colleges' senior students.

Total SNIS summary scores for all students were normally distributed, ranging from a low score of 32 (Jones & Johnson, 1999) to 107. See Figure 1. Total scores were computed by adding each survey item response for an overall total score. Average score was 65.79 ($SD = 12.33$).

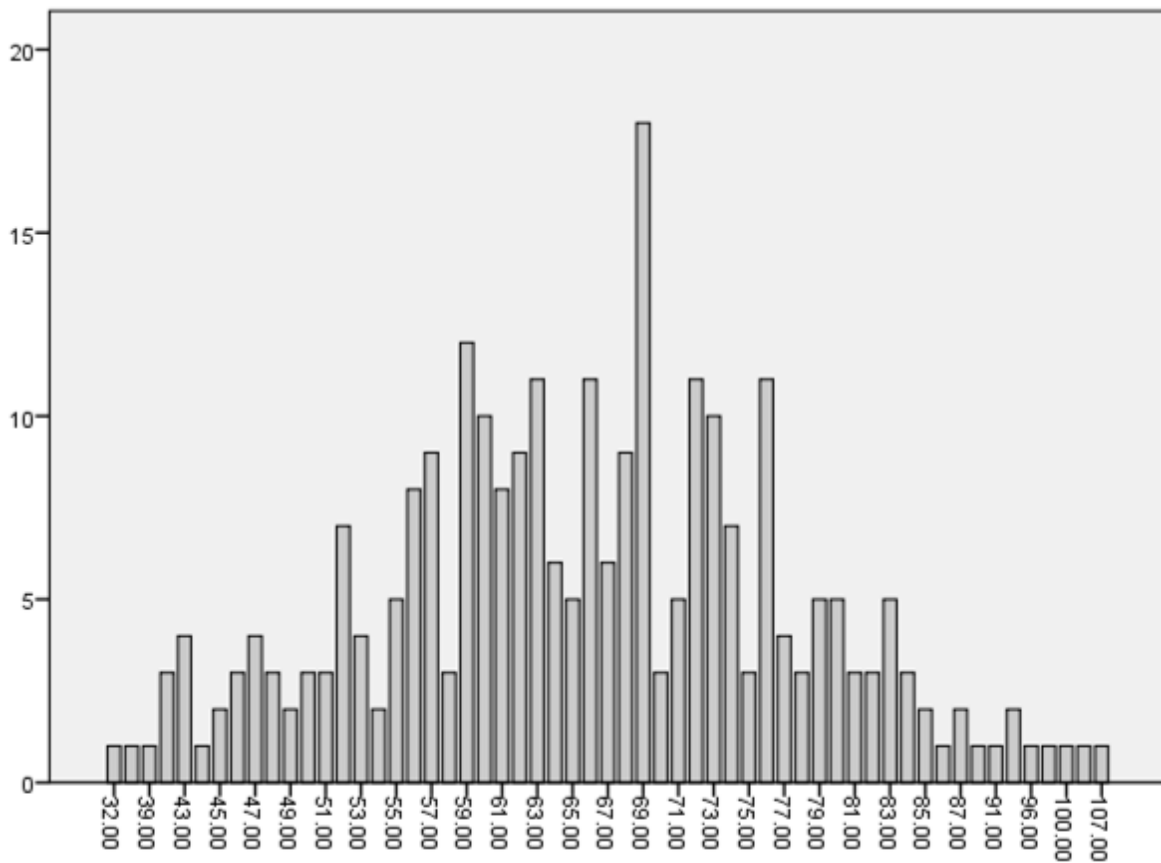


Figure 1. All Individual College Students total SNSI scores

Total scores for public college students demonstrated distributions ranging from a low of 35 to a high of 100. See Figure 2. Average summary score for the public students was 63.65, ($SD = 11.22$).

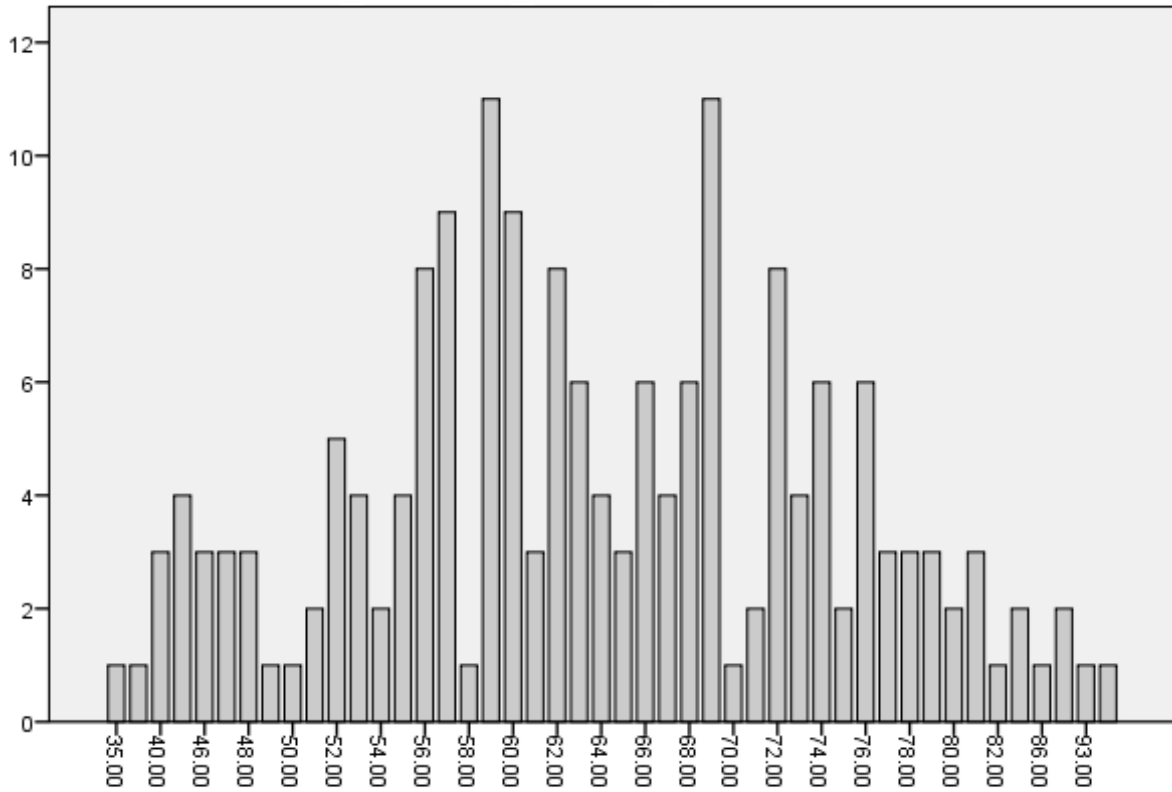


Figure 2. All Individual Public College Students Total SNSI Scores

Scores for the private college students ranged from a low of 32 to a high of 107, with the average summary score 69.68 ($SD=12.72$). See Figures 3.

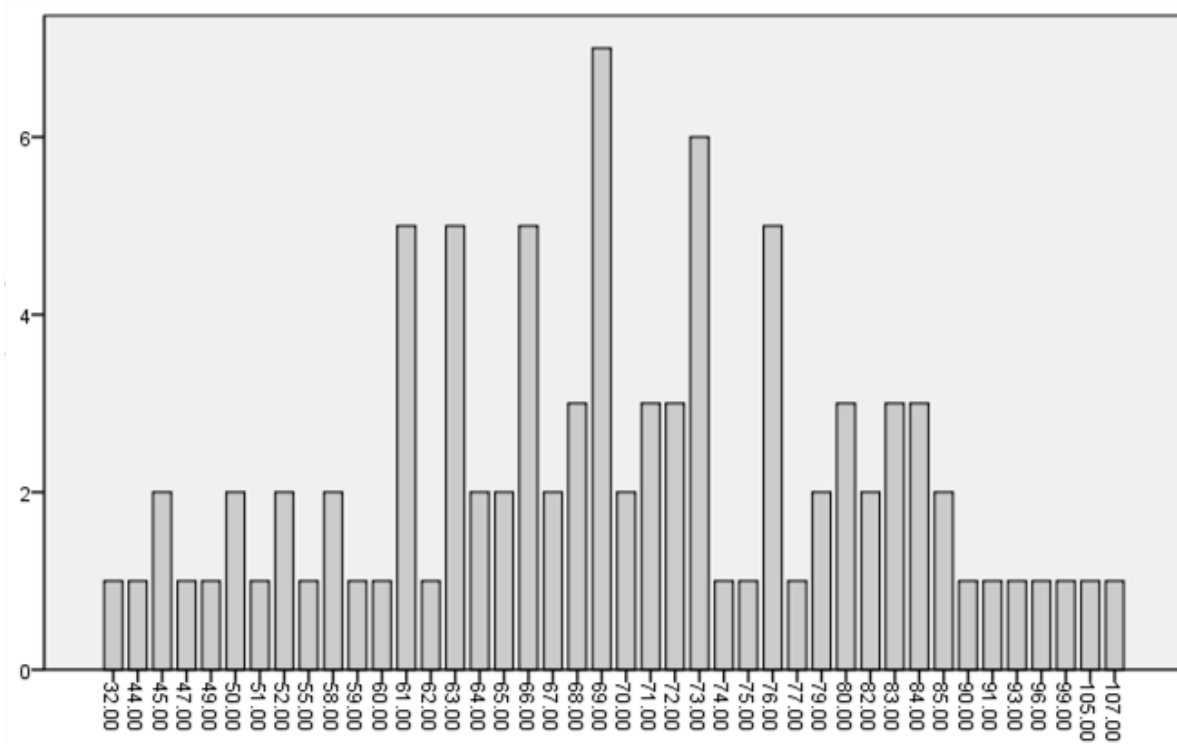


Figure 3. Individual Private College Students Total SNSI Scores

CHAPTER FIVE: DISCUSSION AND CONCLUSIONS

Demographic Sample

Sample size was limited to two schools. Additional participants from other schools in the Midwestern states would increase sample size and diversity. Although females continue to dominate the nursing profession, the number of males in the profession is slowly rising. The number of males (15.6%) in this research was significantly higher than the number of males (5.9%) in the National Sample Survey of Registered Nurses (NSSRN, 2008) data. The increase in males may be explained by economics, as some young men attend nursing school while they pursue their goal of becoming a health care practitioner (either a nurse practitioner (NP) nurse anesthetist (RNA) or physician's assistant (PA)). They can be employed as a registered nurse while they continue their education, with the expectation of increasing their salary significantly when they finish their next degree, and become a health care provider (HCP). Now health care reforms and the economy have required health care facilities to economize with cost-cutting measures. Obviously, even though the salary of a nurse practitioner is higher than the salary of a registered nurse, it is still much lower than the salary of a physician. Financial incentives like student loan forgiveness programs encourage individuals to enter the health care profession as registered nurses and then continue their education to become HCPs.

This study's participants were young, with almost half of men and women 18-21 years of age, followed closely by the 22-25 year old group (total from both age groups was 92%). Even with the slight difference in the age ranges for comparison of the two studies, this number is much higher than NSSRN's (2008) report of 32% of new graduate nurses who were under 25 years of age. Less than six percent of the students were 30 years of age and older in this study, compared to 27% of the students in the NSSRN. Part of the differences between the numbers

may be explained by the fact the NSSRN data was from 2008, and is now six years old. Results from the 2012 study are unavailable, but one would expect to see changes in the newer study, perhaps similar to the National College of Health Assessment II (NCHA, Fall, 2012) research. Reports from the NCHA were very similar to this nursing students' survey. The average college student age (NCHA) was reported at 21.96 years, with 18-20 year olds (54.7%) the largest group on campus. Second were the 21-24 year olds (29.4%), with the remainder of the students 25-29 year olds (8.2%) and 30+ year olds (7.7%). The second reason for the statistical differences is the difference in sample population. The NSSRN collects information from all new graduate registered nurses. Some of new registered nurses over 30 years of age may be students embarking on a second career, or Licensed Practical Nurses becoming registered nurses. Although questions regarding previous educational experience were not asked on this survey, the age range of 18-21 year olds may well indicate a BSN is their first attempt at a college education.

Although females dominate the nursing profession, the number of males in the profession is slowly climbing. Before 2001, the NSSRN reported 5.9% graduating males. Despite well publicized nurse shortages, from 2004-2008 the number climbed from 9.1% to 9.8%. Males comprised 15.6% of the total participants in this study.

Minorities comprised a very small percentage of the participants in this study (6.2%), well below national college student survey reports. NCHA (2012) research reported 37.9% of the participants as minorities, somewhat more than the NSSRN (2008) research study with 22% minority students graduating as registered nurses. One explanation for the significant difference in minority students may be the fact that this area of the upper Midwest is perceived by many to be geographically isolated. A large central hub city like Minneapolis, Minnesota, or Chicago, Illinois, would report a much higher average of minority students. In addition to geographic

isolation, students may not deal well with the frigid temperatures in this area, for approximately half of the school year. The public college is located in a Midwestern city with a large health care facility. The health care facility is the central hub for a large patient referral area.

Perhaps even more significant than the geographical isolation (and frigid temperatures) are the students' feeling of social isolation (Lyden, 2014). Lyden personally interviewed Gravley-Stack, Director of Diversity of a Midwestern university, and minority students, who revealed a lack of belonging, and a lack of engagement in their educational environment.

According to Gravley-Stack there are two reasons for low graduation rates for black (20.5%) and Hispanic (29.2%) students compared to white (42.6%) students (National Center of Education Statistics, 2010). First, beginning with kindergarten, the educational system does not encourage minority students. Second, there are few role models for minority students in college. Student interviews added additional areas of differences, including the language barrier (especially with exams), and the food. The need for engagement may have encouraged students to get involved with campus activities, promoting engagement, and then promoting retention (Lynden, 2014).

Attending college is a rite of passage that usually involves moving away from home and parents, and requires new housing and living arrangements. Two thirds of the participants of this study reported they lived in a dormitory, alone, or with roommates, which was less than the 79% reported by the NCHA (2012). However, the NCHA research included students living off campus in sorority/fraternity houses. Considering the young age range of the participants, this may well be their first time living away from loved ones, and parental (and perhaps peer) pressure may be responsible for the decision. Convenient parking and proximity to classrooms in frigid temperatures may also encourage dorm living. High school friends may have planned to be roommates while they attend the same college. Apartments for rent usually have a wide range of

amenities, and the rents vary accordingly, therefore dorm living may not be a bargain. College enrollment may also influence a student's living arrangements, especially if the college does not have enough dorm room for a spike in student enrollment. The college may need to contract with off campus housing for overflow students.

Personal relationships often shift and change during this transitional time in a student's life. Approximately 15% of the students reported they were in a significant relationship or married, almost twice the national survey results (NCHA, 2012). As the age of marriage has risen to almost thirty years of age, these numbers represent society's current trend regarding marriage.

A very small percentage of the total students in this study were responsible for children. Nine students (3.3%) reported they lived with a partner and children, and four students (1.4%) reported they lived alone with children. Kovner, Brewer, Fairchild, Poornima, Kim and Djukic (2007) reported 18.4% of the participants in their cross-section survey of new registered nurses as having children under six years of age. One explanation for the small number of participants with children could be four year baccalaureate nursing programs typically see students entering the program immediately after high school. The Kovner et al. (2007) research included nurses from a variety of programs, particularly older students with LPN backgrounds.

Some of the students in this research are "Millennials", or children born in the 1980's and 1990's (Olson, 2009). Characteristics of Millennials include technological competence, significant electronic multi-tasking abilities, Internet consumer expertise, and expectations of rapid product and service improvements based on consumer's wants and needs (Olson, 2009). Many early 1980's Millennials were raised in prosperous homes, with no concerns about spending. The depressed state of the economy necessitated many changes. As some parents

could no longer afford to purchase everything their child wanted, young people started increasing the number of hours they worked. Other parents encouraged their children to work, to encourage developing responsible personality traits. This study reported one third of the participants were not employed, another one third of the students reported working between 10 and 20 hours per week, and less than ten per cent reported working between 21 to 30 hours per week. One fourth of the students reported working less than ten hours per week. Five students reported working over 31 hours per week (including one student reporting working over 40 hours per week).

It is difficult to determine which students actually need to work. Some students are responsible not only for themselves, but for their children, compared to students who work for personal spending money. A student may need to continue working a specific number of hours per week to keep their job, and perhaps health care benefits. Many nursing students often either have health care experience, or are currently employed as a nurse's aide. Both nursing students and employers benefit from this employment, as the student, in addition to acquiring coping skills as a health care provider, has an opportunity to become very familiar with the health care facility. Staff in the health care facility have an opportunity to assess the student nurse employee, patient care improves due to increased education in bedside caregivers, and the health care facility may offer employment after the student graduates. Hospitals are primary employers of new graduates, hiring 80.8% of new graduates (NRSNS, 2008). As the cost of orientation for a new nurse continues to rise, employers are very happy to retain employees.

Students may be working to finance their college education. Compared to past graduates, who relied mainly on family for financial support, current nursing students are financing their education with federally assisted loans, other private loans, state and local government scholarships, personal savings, and employer tuition reimbursement (NSSRG, 2008).

Questions on the demographic survey asked about the number of hours students spent in didactic lecture per week, and the number of hours spent in the clinical area each week. In this study, students reported a wide range of hours. Forty percent of the students reported they spent 11-15 hours per week in didactic lecture. The remaining students reported results ranged from one fourth of the students spending less than ten hours per week in lectures to less than ten percent spending 16 hours or more in lecture per week. Internet learning was not discussed, but often is a method of presenting didactic information. Typically, one would expect the sophomore students to spend more time in lectures, while the senior students would spend more time in the clinical area, as they apply their knowledge in practice during senior rotation (two thirds of students in this study reported spending 10 hours or less per week in the clinical area, or one day per week), and approximately 14 percent spent more than 21 hours per week in clinical.

Although there are other factors, lecture, experiences in the clinical area, and study time prepare a student for their career in nursing. Nurse educators and hospital nurse managers are concerned about the gap in nursing practice and the educational preparation of the graduate nurse for that practice (Berkow, Virskis, Stewart & Conway, 2008). Wishful thinking will not increase student nurse clinical time, as competition for clinical experience sites is very challenging, and may restrict a college from increasing student enrollment to meet demand (Ulrich, Krozek, Early, Hipps, Africa & Carman, 2010).

Study prepares the student for the clinical setting. The majority of students (almost sixty percent) reported they studied for three to four hours per day. The range of study time varied from less than two hours daily sixteen percent to eight percent of students who reported they studied seven hours per day. Although there are personal differences, student study time would be similar to a grading curve. The question "Lack of free time" on the SNSI (Jones & Johnson,

1999) was reported as a significant stressor in all six classes in this study (all sophomores, juniors and seniors), indicating students had conflicts with meeting demands of schoolwork, study time and personal entertainment. Students must learn to prioritize their “free” time, and incorporate personal needs into the academic requirements, just as they must learn to prioritize care in the clinical setting. Lack of nursing experience often leads to difficulty with time management.

The final question on the demographic survey asked about sleep. The vast majority of students, over seventy five percent, reported they slept between five and seven hours per night. Professional recommendations for sleep requirements for young adults are typically not defined in hours of sleep, but in descriptions of effects of lack of adequate sleep (National Sleep Foundations, 2014). While five to seven hours of sleep per night may be less than what is recommended for 18 year-olds, it may be adequate for most young adults. Although only a small portion of the students, three per cent, reported they slept less than four hours per night, those students are at risk. They may well be very sleep deprived, and have an increased risk for illness, including depression. Not only are there increased risks for those students, their patients are at risk, too. The single student who reported sleeping 11 or more hours per night also raised issues of concern, of undiagnosed illness and more significantly, the possibility of depression (National Sleep Foundation, 2014).

Jones Survey Discussion

One way ANOVA calculations reported significant differences between private and public college nursing students on multiple questions on the SNSI (Jones & Johnson, 1999), with Cronbach’s Alpha computed at .841 in this research. All seven questions in the subscale of Interface Worries were noted to be more stressful by the private college students. With

comparison of individual student mean scores from all six classes, four items (“exams and/or grades”, “amount of classwork to be learned”, “difficulty of classwork to be learned”, “lack of free time”) were reported as the top four stressors in five of the six classes. Five of six classes (private and public sophomores, private and public juniors, and private seniors) rated survey item “exams and/ or grades” as the most significant stressor, while the sixth class (public seniors) reported it as the second most significant stressor. Four of the six classes (private and public sophomores, private and public juniors) rated “amount of classwork material to be learned” as the second most significant stressor. Private seniors rated “amount of classwork to be learned” as the second most significant stressor, and public seniors rated “amount of classwork to be learned” as their most significant stressor. All students (both schools) reported the “lack of free time” and “difficulty of classwork material to be learned”, as either the third or fourth most significant stressor at that time. One class, the private college junior students, reported “not enough time for family” (instead of “difficulty of classwork material to be learned”) as the fourth most significant stressor. Summary scores also demonstrated a significant difference between schools, $F(1,167) = 15.9, p = .000$, with private students again reporting higher perceived areas of stress.

Theory Relationship

Use of transition theory in nursing and health care professions has been reported by multiple researchers (rehabilitation (Shaul, 1997), smoking cessation (Sharp & Tishelman, 2005), intensive care nursing (Chaboyer, James & Kendall, 2005), and childhood cancer (Wilkins & Woodgate, 2008). Meleis’ social and psychological background, combined with nursing, provides an effective framework for educators as they assist students in a successful

transition in their journey to become registered nurses. One of Meleis's (2000) transitions theory concepts involves types of transitions.

The nursing students in this study were experiencing developmental, situational and organizational transitions. The majority of students in this study were under 25 years of age, and very few reported relationships with significant others or marriage (even fewer reported care of children). They are involved in the development transitions of young adulthood, managing independent dormitory living, with new roommates. Some students have already managed to prioritize important elements in their lives, including time management for academic needs (mandatory attendance and study time), and social activities with peers and family. In addition, some students reported additional responsibilities, such as care of children, and employment to their list of responsibilities. It is typical for many young adults to be sleep deprived, as the majority of students reported five to seven hours of sleep per night. As stated previously in this paper, all of the students reported "lack of free time" as one of their top four stressors. The transition from high school senior (often with family and familiar peer support) to independent college student can be very stressful. Parents may well have reminded the student to finish homework, go to bed, chauffeured the student as needed, and supplied food, clothing, and personal items on demand.

Grade wise, one would expect the students to acquire coping skills in nursing as they advance through the nursing program. Lack of experience may cause sophomores to be stressed with their first clinical experiences. The juniors are expected to build upon their previous knowledge and experience, and are given additional responsibilities in the clinical setting. Juniors must also select an area for their senior rotation practicum, and their choice may result in an employment offer in the future. Senior students may well be stressed by job searches or a

decision regarding postgraduate education. From this researcher's personal experience with students in the clinical setting, students may face organizational stressors every week as they shift among clinical sites.

Properties of the transition experience is another concept from Meleis' theory. As stated previously in this paper, these conditions include the accumulation and processing of new knowledge, including the ability to plan or prioritize. Students with lower mean scores on the SNSI (Jones & Johnson, 1999) have demonstrated awareness and engagement in their role as nursing students. This engagement precedes a sense of belonging. Minority students referenced in this paper (Lyden, 2014) had recognized a need for belonging, and felt more confident after becoming part of campus organizations. As students engage, they become part of their clinical group, and friendships often develop between these students. This sense of belonging and engagement was often demonstrated in the clinical setting as this researcher observed (and encouraged) students to help each other and other staff nurses (as able), rather than just observing. Verbal feedback from the clinical students this researcher supervised was often very positive. By their last clinical experience with this researcher, most of the students recognized staff members, and often volunteered to help them again. The last clinical visit in a clinical setting may be described as a critical point in the transition experience, as students recognized an increased awareness in themselves, as they were more comfortable with the environment, and especially with the patients and staff. Meleis recognized the process takes time, and requires active participation. The steadily increasing high cost of orientation for new employees is pushing health care facilities (especially hospitals) to shorten orientation periods for new graduate nurses (Ulrich, Krozek, Early, Ashlock, Africa & Carman, 2010). Unfortunately, this

may lead to increased stress in the new nurse, disengagement, and either a transfer to a new work environment, or the new nurse leaving the profession.

Some students may not recognize the engagement process had already started before they actually entered the nursing program. One method of evaluating engagement is grades. Although the students in this study reported “grades and/or exams” to be a major stressor in their lives, self-reported GPA’s on the NSDS revealed the majority of students were doing well academically. Evaluation of grades, and student nurse patient care in the clinical setting, continues through the grades, and a pattern of student response can be noted by nurse educators. As mentioned earlier, family and friends (peers) continue to influence a nursing student’s life, and varies in importance for each student. The junior class in the private college reported they perceived significant stress with the item “I do not have enough time for family” on the SNSI (Jones & Johnson, 1991). For those students, culture of family and family influence was very strong. More often, this transient effect can be demonstrated by the student continuing family tradition (and expectation) to become a nurse as family members are nurses. Although most families no longer provide a student’s entire financial support, many families supplement their student’s financial needs. College peers often become friends for the duration of the college experience.

Limitations

This was a convenience sample. Convenience sampling may reduce generalizability of results. Pulido-Martos, Augusto-Landa and Lopez Zafra (2011) reviewed quantitative studies of sources of stress in nursing students. Their study reported researchers used a range of sample size from 46-1,707 participants, with a mean of 326 participants, median 205 participants, and with the 75th percentile at 366 participants. The current study’s sample represented part of the student

nurse population of this geographical area, and consisted of students entering the nursing profession for the first time. The two schools (private and public) of students may not demonstrate characteristics of the population of nursing students in general. If this study were replicated in a different part of the country, particularly a large metropolitan city on the East (or West) Coast, one could expect a different sample, especially in culture/ethnicity.

In addition to cultural or ethnically diverse student demographic limitations, students may also have various histories that may influence their survey responses. Students' educational pathways may vary. A student may be a Licensed Practical Nurse (LPN) with work experience, before he/she enters a Baccalaureate Nursing Program. Although the public college in this research has such a program, the LPN students were not part of this study.

Participants may perceive stress differently based on experience, but responses may also be influenced on when the data was collected. Research data was collected late in the semester, and students may well have been experiencing the stress of final exams. At the public university the senior students were surveyed on their very last day on campus, which may certainly have resulted in multiple stressors, or less perceived stress. Surveys are self-reporting, which may have led to either over/ under reporting of the students' perception of stress. The survey asks students to review their past months' experience, but a perceived stress occurring early in the semester may remain in their memory for a longer period of time.

Finally, the participants reported their stress ratings using a self-report survey with a Likert Scale. Research studies designed with Likert scale responses use fixed choice responses, with the assumption the response increases in intensity in a linear fashion. One may assume the mid-point number in the scale is neutral, but typically no assumptions are made that equal intervals exist between the numbers offered in the scale. The SNSI survey in the current study

only had two labeled anchors, 'not stressful' and 'extremely stressful', which may be open to vast amounts of personal interpretation.

Recommendations

Increasing sample size could well provide additional significant data. Both schools in the setting are in relative geographic proximity, which limits generalizations to the area researched, compared to nursing students across the United States. Expansion to other states' schools would be beneficial. Research in schools with both larger and smaller class size, may also add significant data. Use of an electronic survey may be useful, particularly if the study covered a larger geographical area. An electronic survey may also be beneficial when using a second survey tool, as Jones and Johnson (SNSI, 1991) suggest. A hard copy survey several pages long could appear too lengthy for student participation.

The time the research study is presented to the students is significant. Jones (SNSI, 1999) recommends the students mentally review the past month of experiences as they complete the survey. This researcher recommends the survey be administered shortly before the end of term, to allow students time to experience the clinical setting, but well before the end of term final exams. The NSDS questions covered a wide range of demographic factors. A future study could narrow the research focus, and demographic survey questions could be revised to provide more specific information, to assist the college with meeting student needs more effectively. Several questions could well be simplified (age could be listed by the student, GPA may even be omitted, as students must maintain a specific GPA to remain in school, hours in class/clinical could be omitted, number of hours of sleep could be listed by the student, marital status could be listed).

A question regarding previous experience in a health care related field would be a useful. The student could be asked to select his/her three most significant stressors from a list of

answers. Students could be asked to select what they perceived was most helpful in dealing with their stress, also from a list of answers. Nursing instructors, family, peers, physical exercise, and breathing exercises could be on the list of answers. Individual holistic stress management may be incorporated into the curriculum of both schools, replicating research by Cap and Williams (2011), as faculty developed classes with the students for lifelong stress management techniques. Each student could develop their own health promotion goals. Examples could include smoking cessation, nutrition counseling, sleep hygiene, and an inexpensive, accessible method of physical exercise.

Using a second survey tool provides additional information regarding stress, and a comparison tool for the research. Research could also be done longitudinally, following a class from the first year of the nursing program through the senior year. Research may be repeated during the same year, at the beginning and end of the school year.

Summary

The purpose of this research was to assess and compare nursing students from two colleges, one private, and one public, for their perceptions of stress. Data indicated the private college students were experiencing significantly higher stress than the public college students. Sophomores from both schools did not demonstrate significant stressors. Private juniors and seniors reported more significant stressors than public junior and senior students. Overall, students from both schools reported the most stress in the academic area, with "exams/grades", and "amount and difficulty of classroom material to be learned" leading the list of stressful items. Item "lack of free time" was also on every students' top four list of significant stressors.

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APPENDIX A: CONSENT FROM JONES

RE: Permission to use the SNSI - Emily Kulland

Page 1 of 2

RE: Permission to use the SNSI

Martyn Jones <m.c.jones@dundee.ac.uk>

Thu 3/6/2014 2:44 AM

To: Emily Kulland <emily.kulland@ndsu.edu>;

📎 2 attachments

SNSIMEM.DOC; jj 1999 work and stress.pdf;

Emily

I am happy for you to use this, see SNSI and validation paper

Martyn
Prof Martyn Jones

Professor of Healthcare Research
School of Nursing and Midwifery
University of Dundee
11 Airlie Place, DUNDEE, DD1 4HJ
Phone: 01382 388656
Fax: 01382 388533
Email: m.c.jones@dundee.ac.uk

Associate Director
Social Dimensions of Health Institute
Universities of Dundee and St Andrews
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Email: m.c.jones@dundee.ac.uk

The University of Dundee is a Scottish Registered Charity, No. SC015096.
The University of St Andrews is a charity registered in Scotland : No SC013532

From: Emily Kulland [mailto:Emily.Kulland@my.ndsu.edu]

Sent: 05 March 2014 01:47

To: Martyn Jones

Subject: Permission to use the SNSI

<https://pod51034.outlook.com/owa/>

11/2/2014

APPENDIX B: JONES SCORING INSTRUMENT

Student Nurse Stress Index:

Below is list of items that may be associated with stress by students such as yourself.

Think of real events which have occurred in the past month in your role as a student. For each item please circle the rating that applies to **YOU**. Answer all 22 items.

	ITEM	NOT STRESSFUL				EXTREMELY STRESSFUL
1	Amount of classwork material to be learned	1	2	3	4	5
2	Difficulty of classwork material to be learned	1	2	3	4	5
3	Examination and/or grades	1	2	3	4	5
4	Peer competition	1	2	3	4	5
5	Attitudes/expectations of other professionals towards nursing	1	2	3	4	5
6	Lack of free time	1	2	3	4	5
7	College/School response to student needs	1	2	3	4	5
8	Fear of failing in course	1	2	3	4	5
9	Actual personal health problems	1	2	3	4	5
10	Physical health of other family members	1	2	3	4	5
11	Relationships with parents	1	2	3	4	5
12	Other personal problems	1	2	3	4	5
13	Relations with other professionals	1	2	3	4	5
14	Too much responsibility	1	2	3	4	5
15	Lack of timely feedback about performance	1	2	3	4	5

Answer the following questions from your reflections on your clinical experience:

	ITEM	NOT STRESSFUL				EXTREMELY STRESSFUL
1 6	Client attitudes towards me	1	2	3	4	5
1 7	Client attitudes towards my profession	1	2	3	4	5
1 8	Atmosphere created by teaching staff	1	2	3	4	5
1 9	Relations with staff in the clinical area	1	2	3	4	5

Other academic and related items:

	ITEM	NOT STRESSFUL				EXTREMELY STRESSFUL
2 0	I am not sure what is expected of me	1	2	3	4	5
2 1	I have no time for entertainment	1	2	3	4	5
2 2	I do not have enough time for my family	1	2	3	4	5

Student Nurse Stress Index:

Scoring instructions for Student Nurse Stress Index (S.N.S.I.)

The S.N.S.I. has a four factor structure (Jones & Johnston, 1997), with “*Academic load*”, “*Clinical concerns*”, “*Personal problems*” and “*Interface worries*” as underlying variables.

Evidence regarding the factor congruence across independent data sets, and the reliability and validity of the measure can be obtained from Martyn Jones (m.c.jones@dundee.ac.uk).

The S.N.S.I. subscale and total scores are calculated using the unit weighting method of scoring.

S.N.S.I. Total

Sum scores on items 1-22 to give an overall total, ranging from 22 to 110.

“Academic load”

Sum scores on items 1, 2, 3, 8, 14, 18, 20 to give a subscale total ranging from 7 to 35.

“Clinical concerns”

Sum scores on items 13, 14, 16, 17, 18, 19, 20 to give a subscale total ranging from 7 to 35.

“Personal problems”

Sum scores on items 9, 10, 11, 12 to give a subscale total ranging from 4 to 20.

“Interface worries”

Sum scores on items 4, 5, 6, 7, 15, 21, 22 to give a subscale total ranging from 7 to 35.

**DO NOT SUM SUBSCALE SCORES TO OBTAIN
AN OVERALL S.N.S.I. TOTAL.**

Confirmatory factor analysis shows that S.N.S.I. has a less simple factor structure, with several variables loading onto more than one factor, contact Martyn Jones for more details (m.c.jones@dundee.ac.uk).

N.B. Following validation of the measure, the administration of the S.N.S.I. alongside a measure of social desirability, e.g. (Crown & Marlowe, 1960), is recommended particularly in named reporting conditions.

MCJ Jan 2000

References

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APPENDIX C: STUDENT NURSE STRESS INDEX

Student Nurse Stress Index

Below is a list of items that may be associated with stress by students such as yourself. Think of real events which have occurred in the past month in your role as a student. For each item please circle the rating that applies to YOU. Answer all 22 questions.

	Not Stressful			Extremely Stressful	
1. Amount of classwork material to be learned	1	2	3	4	5
2. Difficulty of classwork material to be learned	1	2	3	4	5
3. Examination and/or grades	1	2	3	4	5
4. Peer competition	1	2	3	4	5
5. Attitudes/expectations of other professionals towards nursing	1	2	3	4	5
6. Lack of free time	1	2	3	4	5
7. College/School response to student needs	1	2	3	4	5
8. Fear of failing in course	1	2	3	4	5
9. Actual personal health problems	1	2	3	4	5
10. Physical health of other family members	1	2	3	4	5
11. Relationships with peers	1	2	3	4	5
12. Other personal problems	1	2	3	4	5

Student Nurse Stress Index

	Not Stressful			Extremely Stressful	
13. Relations with other professionals	1	2	3	4	5
14. Too much responsibility	1	2	3	4	5
15. Lack of timely feedback about performance	1	2	3	4	5

Answer the following questions from your reflections on your clinical experience.

16. Client attitudes towards me	1	2	3	4	5
17. Client attitudes towards my profession	1	2	3	4	5
18. Atmosphere created by teaching staff	1	2	3	4	5
19. Relations with staff in the clinical area	1	2	3	4	5

Other academic and related items:

20. I am not sure what is expected of me	1	2	3	4	5
21. I have no time for entertainment	1	2	3	4	5
22. I do not have enough time for my family	1	2	3	4	5

APPENDIX D: CONSENT FROM BAKER

RE: permission to use your nursing student demographic survey - Emily Kulland

Page 1 of 2

RE: permission to use your nursing student demographic survey

Emily Kulland

Wed 3/5/2014 11:45 AM

To: Mary L. Baker <mbaker@csusm.edu>;

Dear Mary,

Thank you. I appreciate it, and will continue working on my thesis project.

Sincerely,

Emily

From: Mary L. Baker <mbaker@csusm.edu>

Sent: Tuesday, March 04, 2014 8:10 PM

To: Emily Kulland

Subject: RE: permission to use your nursing student demographic survey

Dear Emily,

I give my permission for your to use the survey as long as I am credited. Please send me a copy of your thesis when you are done; I would look forward to reading your results. Good luck on your thesis.

Mary

Be the change you want to see in the world - Mahatma Gandhi

Mary L. Baker, MSN, RN, CNS, FNP-BC, PHN

Director of Healthcare Projects & Faculty

CSUSM School of Nursing

Email: mbaker@csusm.edu

Phone: 760-822-8264

Skype: msmlbaker

From: Emily Kulland [mailto:Emily.Kulland@my.ndsu.edu]

Sent: Tuesday, March 04, 2014 6:07 PM

To: Mary L. Baker

Subject: permission to use your nursing student demographic survey

Dear Mary,

I am a nursing education major at North Dakota State University in Fargo, N.D. and I am working on my Master's thesis on nursing student stress. I appreciated your work in "Nursing Student Stress and Demographic Factors", and would like permission to use a variation of your survey in my study. You would be referenced and receive credit for your work in my paper. I am enclosing a copy of the

<https://pod51034.outlook.com/owa/>

11/2/2014

APPENDIX E: NURSING STUDENT DEMOGRAPHIC SURVEY

NURSING STUDENT DEMOGRAPHIC SURVEY

1. ____ 1. What is your gender?
a) male b) female c) prefer not to answer
2. ____ 2. What is your age in years?
a) 18-21 years b) 22-25 years c) 26 -29 years d) 30-33 years
e) 34 years or more
3. ____ 3. What is your current GPA?
a) 1.99 or below b) 2-2.99 c) 3-3.99 d) 4.0
4. ____ 4. With whom do you live?
a) by myself b) dorm, alone or with roommate(s) c) with spouse/ significant other
d) with spouse/significant other and children e) with parents f) with just my children
5. ____ 5. Are you responsible for arranging for childcare, or giving childcare in your home?
a) yes b) no
6. ____ 6. Are you currently working?
a) No b) less than 10 hours per week c) between 10-20 hours
d) between 21-30 hours e) between 31-40 hours f) over 40 hours per week
7. ____ 7. What is your race/ethnicity?
a) White b) Black/African American c) American Indian d) Alaskan Native e)
Asian f) Native Hawaiian g) Pacific Islander h) Hispanic
8. ____ 8. On average, how many hours per day do you spend studying?
a) hours or less b) 3-4 hours c) 5-6 hours d) 7 or more hours
9. ____ 9. How many hours do you spend in didactic lecture class each week?
a) Less than 10 hours b) 11-15 hours c) 16-20 hours d) 21-25 hours
e) 26 or more hours per week
10. ____ 10. How many hours do you spend in clinical, including senior rotation, each week?
a) Less than 10 hours b) 11-15 hours c) 16-20 hours
d) 21- 25 hours e) 26 or more hours per week
11. ____ 11. On average, how many hours of sleep do you get each night?
a) Less than 4 hours b) 5-7 hours c) 8-10 hours d) 11 or more hours

APPENDIX F: STUDENT PARTICIPANT CONSENT

NDSU

NORTH DAKOTA STATE UNIVERSITY

Title of Research Study: Nursing Student Stress

Dear nursing student,

My name is Emily Kulland. I am a graduate student in the Nursing Department at North Dakota State University. I am conducting a research study to examine perceived stress in sophomore, junior and senior nursing students. Research studies in the past have found nursing students feel different levels of stress and stress in different areas of their lives while they go to school.

As a nursing student, you are invited to participate in this study. Your participation is entirely voluntary and you may change your mind or quit participating at any time with no penalty to you. If you decide to complete this survey, you may tear off this page and keep it for your records.

We have taken reasonable safeguards to minimize any known risks. For example, there may be a minimal risk of loss of privacy, if a fellow student glances at your survey while you are answering questions.

Research participants will receive no compensation for their time.

Analysis of the data will look at stressful areas for all three grade levels of nursing students. This information could encourage implementation of stress management interventions to core nursing classes in the future. As the nation continues to face nursing shortages, stress management in nursing students could also help new nurses working in the field.

It should take no more than 10 minutes to complete the two attached surveys. One survey asks questions about demographic information, like age and GPA. The other survey asks questions you to rate your stress levels. Instructions are found at the beginning of each survey.

Participation in this study is anonymous. No individual information will be reported. Your responses will be combined with information from other students taking part in the research study. Only grade level comparisons will be made and reported in summary form. Only the principal investigator and co-investigator will have access to the survey responses. Combined grade results will be analyzed and presented as part of my master's thesis requirements in nursing education.

If you have any questions about this project, please contact me by email: emily.kulland@my.ndsu.edu or by phone: 701- 231-7395 (NDSU Nursing Office) or contact my advisor, Dr. Norma Kiser-Larson at 701- 231-7775 or by email: norma.kiser-larson@ndsu.edu.

You have rights as a research participant. If you have questions about your rights or complaints about this research, you may talk to the researcher or contact the NDSU Human Research Protection Program at 701- 231-8908, toll free at 1-855-800-6717, by email at ndsu.irb@ndsu.edu, or by mail at: NDSU HRPP Office, NDSU Dept. 4000, P.O. Box 6050, Fargo, ND 58108-6050.

Thank you for your participation in this research study. If you wish to receive a copy of the research results, please contact me via email at emily.kulland@my.ndsu.edu.

DEPARTMENT OF NURSING

NDSU Dept 2670 | PO Box 6050 | Fargo ND 58108-6050 | 701.231.7395 | Fax 701.231.6257 | www.ndsu.edu

NDSU is an EQ/AA university.

APPENDIX G: INSITUTIONAL REVIEW BOARD CONSENT



April 11, 2014

FederalWide Assurance FWA00002439

Dr. Norma Kiser-Larson
Nursing
Sudro 222C

Re: IRB Certification of Exempt Human Subjects Research:
Protocol #PH14250 , "Nursing Student Stress"

Co-investigator(s) and research team: **Emily Kulland**

Certification Date: 4/11/14 Expiration Date: 4/10/17
Study site(s): **NDSU and Jamestown College**
Funding: **n/a**

The above referenced human subjects research project has been certified as exempt (category # 2) in accordance with federal regulations (Code of Federal Regulations, Title 45, Part 46, *Protection of Human Subjects*). This determination is based on the original protocol form (rec'd 4/9/14) and revised information sheet (received 4/10/14).

Please also note the following:

- If you wish to continue the research after the expiration, submit a request for recertification several weeks prior to the expiration.
- Conduct the study as described in the approved protocol. If you wish to make changes, obtain approval from the IRB prior to initiating, unless the changes are necessary to eliminate an immediate hazard to subjects.
- Notify the IRB promptly of any adverse events, complaints, or unanticipated problems involving risks to subjects or others related to this project.
- Report any significant new findings that may affect the risks and benefits to the participants and the IRB.
- Research records may be subject to a random or directed audit at any time to verify compliance with IRB standard operating procedures.

Thank you for your cooperation with NDSU IRB procedures. Best wishes for a successful study.

Sincerely,

Kristy Shirley, CIP, Research Compliance Administrator

INSTITUTIONAL REVIEW BOARD
NDSU Dept 4000 | PO Box 6050 | Fargo ND 58108-6050 | 701.231.8995 | Fax 701.231.8098 | nds.u.edu/irb

Shipping address: Research 1, 1735 NDSU Research Park Drive, Fargo, ND 58102

NDSU is an EO/AA university.