

EXAMINING THE RELATIONSHIP BETWEEN RECENT LIFE EXPERIENCES  
AND PERCEIVED STRESSORS IN NURSING STUDENTS

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A Thesis Submitted to Clarion and Edinboro Universities  
In Partial Fulfillment of the Requirements for the Master of Science in Nursing Degree  
May, 2016


5/14/16  
Date

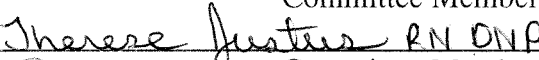
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Date

5/23/16  
Date

  
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## **Acknowledgements**

The authors would like to acknowledge:

Emily Hollenbeck, RN for her research and contribution to this project.

Natalie Smith, BS. Department of Biostatistics. University of North Carolina Gillings School of Global Public Health

Debbie Ciesielka, DEd, ANP-BC. Associate Professor of Nursing, Venango College of Clarion University. Program Coordinator, Clarion & Edinboro Universities' MSN Program.

# **EXAMINING THE RELATIONSHIP BETWEEN RECENT LIFE EXPERIENCES AND PERCEIVED STRESSORS IN NURSING STUDENTS**

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## **Abstract**

RN to BSN and MSN students experience a degree of stress on the job and in the classroom that could lead to negative personal and professional consequences, which in turn may contribute to negative trends in the nursing field including job dissatisfaction, burnout, and compassion fatigue. Guided by Tsai's Theory of Caregiver Stress, this study examines whether a relationship exists between stress level and intensity of life experiences in 84 nursing students in Clarion University's RN to BSN ( $n=51$ ) and MSN programs ( $n=33$ ). Participants were asked to complete the Perceived Stress Scale and Survey of Recent Life Experience reporting their stress levels and perceived stressors over the course of the previous month, as well as a short demographic survey. The correlation between stress and life events was then examined, as well as the relationship of stress to demographic covariates such as age, gender, marital status, years of nursing experience, and enrollment status. As anticipated, a strong positive correlation was found between stress level and life intensity in both RN to BSN and MSN student participants ( $p<0.0001$ ). Demographic variables were found to have no statistically significant correlation with stress levels for participants in all categories, with the notable exception of marital status. Identification of the relationship between life intensity and stress level, as well as future research to discover the most commonly experienced stressful life events in this population, can inform strategies used by nurse educators to improve the overall satisfaction and success of nursing students.

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## **Chapter 1**

### **Introduction**

Choosing nursing as a career is choosing to acquire a body of knowledge and a skill set that allow the nurse to provide medical care, emotional support, and education to people experiencing a time of illness or need. Over the span of an education and career, a nurse is likely to witness the best and worst of the human condition in high pressure, high stress situations that require the nurse to remain calm, controlled, and compassionate. The stress inherent in nursing is further complicated by the difficult atmosphere of the hospital and the demands of modern healthcare, with their focus on cost savings, continued education, and patient satisfaction. This stress begins with a nurse's education as the student attempts to balance a rigorous academic curriculum with clinical learning and personal obligations. By recognizing the level of stress that nursing students experience and identifying sources of stress, nursing programs can better provide students with the tools needed to manage stress throughout their education and careers. This can lead to potentially improving retention, career longevity, and personal wellbeing of the nursing workforce.

This chapter will provide background information on stress and its impact on health and wellbeing within the general population as well as among nursing staff and students. In addition, a statement of the problem, research question, and related hypotheses will be outlined. Terms will be defined and a brief overview of the conceptual framework guiding this study, assumptions, and limitations will be detailed. A brief summary of the review of literature and gaps of knowledge on this topic will also be discussed.

## **Background of the Problem**

The impact of stress on the human experience has been well documented. Stress is a state of physiological and psychological distress created when external and internal stimuli (or a combination of the two) are greater than an individual's ability to adapt to the situation (Keller et al., 2012). These stimuli, referred to as stressors, may be real or perceived, and can contribute to a pattern of maladaptive responses that threaten personal wellbeing. While a certain degree of stress can be a positive motivator leading to increased functionality, repeated and intense levels of stress that overwhelm an individual's ability to cope are likely to lead to a state of dysfunction (Donovan, Doody, & Lyons, 2013). Stress is an individualized experience. Two people experiencing the same stressors may not perceive the same degree of stress based on factors such as personality, coping styles, and availability of stress-reduction resources (Segerstrom & O'Connor, 2012).

Research has suggested that stress "affects health directly, not only by impacting autonomic and neuroendocrine responses, but also indirectly, by changing habitual and non-habitual health behaviors" (Segerstrom & O'Connor, 2012, p.128). Stress has been linked to negative physiological and psychological health outcomes including premature mortality (Keller et al., 2012). A literature review completed by Donovan et al. (2013), on the effects of stress on physiological and psychological health (and their subsequent implications for nurses), identified an array of research-supported health issues associated with extended exposure to stress. Among the physiological effects are headaches, muscular tension, chest pain, indigestion, palpitations, disturbed sleep, fatigue, increased susceptibility to respiratory infections, eating disorders, drug and alcohol abuse, and



coronary heart disease. Psychological effects include anxiety, depression, apprehension, fear, anger, feelings of inadequacy or numbness, cognitive impairment, poor decision making, apathy, and burnout (Donovan et al., 2013). People experiencing stress may subsequently report participating in unhealthy behaviors such as “smoking, excessive drinking, poor diet and little exercise” (Donovan et al., 2013, p. 967) in an attempt to cope.

Nursing in all its incarnations is a form of professional caregiving that is by nature challenging and stressful. Nursing is a demanding job that requires quick thinking in evolving situations, frequently working under less than ideal conditions (such as short-staffing, shortages of resources, rotating shifts, and long hours with insufficient breaks), and coping with the pressures of continuing professional development and the emotional toll that comes from dealing with illness, death, and dying (Donovan et al., 2013). Multiple on-the-job factors in nursing, such as professional status and the competing demands of patient care and bureaucratic processes, have been shown to lead to increased levels of stress (Jahromi, 2014). In return, sustained increased stress among nurses can result in exhaustion, decreased focus, and burnout (Davies, 2008), leading to increased use of sick time (Donovan et al., 2013). Stress has also been linked to a feeling of not being able to fully provide for a patient’s needs and decreased patient satisfaction with nursing care (Beddoe & Murphy, 2004; Vahey, Aiken, Sloane, Clarke, & Vargas, 2004).

Stress is a cumulative process with “various factors that act as antecedents to stress . . . such as demographics, personality traits, and environmental life events” (Watson, et al., 2009). Nurses with personal stress, inadequate support systems, and personal trauma outside of the workplace are at particular risk for compassion fatigue, a

phenomenon in which the combination of environmental stressors and patients' needs can lead the nurse as a caregiver to feel apathetic, detached, and ineffective (Bush, 2009).

For nurses, stress and its effects begin with the educational process and are evident in undergraduate as well as graduate nursing students, with evidence suggesting nursing students report higher levels of stress than those of students in other healthcare professions (Beddoe & Murphy, 2004). The effect of personal stressors on nursing students' perception of stress levels during their education is a growing body of study. These stressors include, but are not limited to, financial difficulties, balancing education with employment and family responsibilities, absence of free time, and satisfaction with quality of life indicators such as health, sleep, nutrition, and support from others (Chernomas & Shapiro, 2013). Contributors to stress in undergraduate nursing students include "perceptions of clinical practice, coping, personal issues, and balancing school, work, and personal life" (Chernomas & Shapiro, 2013, p. 255).

For nurses transitioning into the advanced practice nursing role, graduate school "may generate anxiety, conflict, loss of confidence in clinical skills, and feelings of incompetence" (Poronsky, 2013, p. 351). Most advanced practice nursing students are registered nurses who pursue an advanced degree due to a desire for increased autonomy and responsibility (Maville, Kranz, & Tucker, 2004). Nurses who are driven, committed, and idealistic are most at risk for experiencing compassion fatigue and burnout due to sustained levels of stress (Bush, 2009). Nurses pursuing advanced degrees would likely fall into this category. Graduate nursing students self-report above-average to high levels of stress associated with the demands of advanced practice programs combined with family and work responsibilities (Maville et al., 2004). High levels of stress are likely to

negatively affect memory, concentration, and problem-solving, adding additional challenges to learning and academic success (Beddoe & Murphy, 2004).

### **Statement of the Problem**

Undergraduate and graduate nursing students experience a degree of stress that could lead to discontent, burnout, and compassion fatigue. Factors contributing to stress can include life experiences occurring outside of the classroom. Identification of the relationship between perceived stressors and recent life experiences can inform strategies used by nurse educators to improve the overall satisfaction and success of nursing students.

### **Research Questions**

This study aims to answer the following questions:

1. Is there a difference between RN to BSN and MSN students in their level of stress as self-reported on the Perceived Stress Scale (PSS)?
2. Is there a difference between RN to BSN and MSN students in the intensity of their life experiences in the previous month as self-reported on the Survey of Recent Life Experiences (SRLE)?
3. What is the relationship between online RN to BSN and MSN students' level of stress as measured on the PSS and intensity of their life experiences in the previous month as self-reported on the SRLE?
4. What is the relationship between the demographic variables (age, gender, marital status, years of experience as an RN, and enrollment status) and level of stress as self-reported on the Perceived Stress Scale?

## **Hypotheses**

The following are hypothesized related to each research question:

Question #1:

H<sub>0</sub>: There is no difference between RN to BSN and MSN students in their level of stress as self-reported on the Perceived Stress Scale (PSS).

H<sub>A</sub>: There is a difference between RN to BSN and MSN students in their level of stress as self-reported on the Perceived Stress Scale (PSS).

Question #2:

H<sub>0</sub>: There is no difference between RN to BSN and MSN students in the intensity of their life experiences in the previous month as self-reported on the Survey of Recent Life Experiences (SRLE).

H<sub>A</sub>: There is a difference between RN to BSN and MSN students in the intensity of their life experiences in the previous month as self-reported on the Survey of Recent Life Experiences (SRLE).

Question #3:

H<sub>0</sub>: There is no relationship between online RN to BSN and MSN students' level of stress as measured on the PSS and intensity of their life experiences in the previous month as self-reported on the SRLE.

H<sub>A</sub>: There is a relationship between online RN to BSN and MSN students' level of stress as measured on the PSS and intensity of their life experiences in the previous month as self-reported on the SRLE.

Question #4:

H<sub>0</sub>: There is no relationship between the demographic variables (age, gender, marital status, years of experience as an RN, and enrollment status) and level of stress as self-reported on the Perceived Stress Scale.

H<sub>A</sub>: There is a relationship between the demographic variables (age, gender, marital status, years of experience as an RN, and enrollment status) and level of stress as self-reported on the Perceived Stress Scale.

### **Definition of Terms**

For the purpose of this study, the following terms have been defined.

1. Graduate nursing student – An individual currently licensed as a registered nurse who has a bachelor's degree in the science of nursing and is in the process of completing coursework towards a master's degree in nursing at an accredited university in Western Pennsylvania.
2. Life experiences- Defined by the Perceived Stress Scale as “adult hassles” (Mindgarden, 2014) and often referred to in stress research as “stressors.”  
Examples that would pertain to this study include death of a loved one, marriage, financial problems, and balancing work, school, and family life.
3. RN to BSN nursing student – An individual currently licensed as a registered nurse who is in the process of completing coursework towards a bachelor's degree in the science of nursing at an accredited university located in Western Pennsylvania.
4. Stress – “The psychological and/or physiological response of an organism to any demand made upon it by agents threatening its physical or emotional well-being,”

(stress, n.d.). For this study’s purposes, stress can be further defined as a response to the interaction between an individual and factors within their environment.

### **Need for the Study**

A review of literature for related search terms was completed in CINAHL Full Text using the Boolean method and a limitation of publication date between 2011 and 2016, with an additional limitation for research conducted within the United States for the final two search combinations. This geographical limitation was added due to consideration for stressors related to the specific requirements of American college students such as potential relocation, financial burden, socioeconomic climate, and cultural norms of college life. Search results appear in Table 1.

Table 1

*Number of Results for Related Boolean Search Terms*

<b>Boolean Search Terms</b>	<b>Results</b>
“stress” AND “life experiences”	36,136
“stress” AND “nurses”	125,865
“stress” AND “student”	305,601
“stress” AND “nursing student”	3,580
– geographically limited to US	238
“stress” AND “nursing student” AND “life experiences”	437
– geographically limited to US	115

The search yielded a limited number of articles that focused on stress experienced by a nursing student. The majority of articles examined stress relative to the experience of caring for patients. In the final combination of search terms (stress, nursing student, and life experiences), several articles described stress in the context of baccalaureate nursing students and academic performance. In the preceding combination of search terms (stress and nursing student), limiting returns to domestic research eliminated the bulk of useful research relevant to our topic.

The majority of literature regarding nursing students and the level of stress they experience in the United States predates the generally accepted timeframe of studies published within the last five years. This is problematic due to the evolving nature of secondary education in the US. A college degree has increasingly become a necessity and is available to an ever-widening range of young people from a multitude of socioeconomic backgrounds. In addition, a struggling economy has led to numerous adult learners pursuing second careers. Costs of attendance have grown while job markets have stagnated. A nationwide push for an influx of new nurses to combat the projected nursing shortage has resulted in increased competition for admission to nursing programs and elevated pressures for academic success. These cultural changes contribute to the life experiences of nursing students and potentially impact their level of stress. Ongoing examination of current stressors is necessary to identify areas of concern for nursing students and to empower educators to assist them in mitigating stress throughout the educational process.

## **Significance of the Problem**

Stress among nurses is a recognized phenomenon. In a 2011 survey conducted by the American Nurses Association, 74% of nurses indicated stress in the workplace as their top concern. More importantly, the percentage had changed little in ten years (70% versus 74%). Likewise, the demands of being a nursing student are a known source of stress across all levels of education (Maville et al, 2004; Watson et al., 2009). For the adult student earning the RN to BSN or an MSN degree, stress is compounded by the competing demands of career and education. Yet, increasingly, earning the BSN or advanced degrees in nursing is an expectation, if not an employer mandate, for many nurses.

The *Institute of Medicine Future of Nursing Report* (IOM, 2011) recommendations include measures to ensure that nurses engage in lifelong learning. Pennsylvania has a long history of preparing registered nurses, but primarily at the diploma and associate degree level. As of March 2015, pre-licensure RN programs in Pennsylvania totaled 84, with over half at the diploma (18) or associate degree (27) level (Pennsylvania Department of State, 2015). To meet the IOM goal of 80% of RNs at the BSN level by 2020 (IOM, 2011), universities have responded by developing RN to BSN degree programs, the majority of which are online. In Pennsylvania, 40 such programs are available across the state (ACEN, 2015; CCNE, 2015).

A second goal in the 2011 IOM report is to double the number of nurses with a doctoral level degree by 2020. The effect of this goal will be an increased number of nurses pursuing advanced practice nursing degrees. Again, Pennsylvania is at the forefront with 67 nurse practitioner programs (Pennsylvania State Board of Nursing,



2014). Like actively employed registered nurses pursuing the RN to BSN degree, nurses attending school to expand their role to nurse practitioner will be at risk for experiencing a heightened degree of stress both on the job, in their education, and at home.

Given the large number of nurses in Pennsylvania who attend RN to BSN and advanced degree programs in nursing, identifying factors related to stress is important. The aim of the present study is to identify life events and their relationship to stress, with the intentions of bringing awareness. As noted by Maville et al. (2004), although nurses are educated to identify patterns of stress in patients and to teach patients non-pharmacological methods to control stress (exercise, imagery, meditation, music therapy, relaxation therapy, etc.), studies suggest nursing students are unable to apply these methods to their own lives. Identifying reasons for perceived stress in nursing students will allow educators to adapt programs to reduce student stress, easing the transition into a new role and empowering nurse graduates to better address both their own stress and the stress of the patients they treat.

### **Assumptions**

The following assumptions were made:

1. All nursing students experience some degree of stress, which is likely to vary based on the presence or absence of specific stress factors in each student's environment.
2. Participants completed the survey honestly.

### **Summary of the Problem**

The nursing profession inherently comes with stressors that are known and accepted as part of the job. The physical and emotional effects of stress can contribute to

significant and debilitating health outcomes. Stress as a part of nursing is evident from the start and nursing students report higher levels of stress overall. As employers and educational programs respond to the Institute of Medicine's (2010) call to educate nurses beyond the basic skills required for licensure, greater numbers of nurses can be expected to return to school at a time when many are already balancing the demands of work and family responsibilities, thus increasing their stress.

The goal of this study is to generate awareness of specific factors that cause or increase stress in nursing students. This study focuses on those learners who are participating in online programs designed for the flexibility required by nurses who are working while simultaneously attending classes. Existing literature supports the need for continued studies of specific factors of stress and the development of awareness to those factors to minimize the health risks associated with stress.

## **Chapter 2**

### **Review of Related Literature**

This study examines the relationship between recent life experiences and perceived stressors in undergraduate and graduate nursing students at a university in Western Pennsylvania. Concepts reviewed from the literature in this chapter include perceptions of stress in general, among nurses, among students, and among nursing students. In addition, Tsai's (2003) Theory of Caregiver Stress, which guided the literature review and serves as the foundation to this study, is described.

#### **Perceptions of Stress**

As discussed in Chapter One, research on stress, and its effects on health, has been extensive. Stress has a direct effect on health including an impact on autonomic and neuroendocrine responses (Segerstrom & O'Connor, 2012). Stressful experiences that occur early in life can permanently alter the structure of the brain's visceral sensory pathways that control emotion, which may shape an individual's ability to respond to stress later in life (Rinaman, Banihashemi, & Koehnle, 2011). Donovan, Doody, and Lyons (2013) conducted a literature review citing numerous studies linking sustained levels of high stress to various health ailments such as headaches, muscular tension, chest pain, indigestion, palpitations, disturbed sleep, fatigue, increased susceptibility to respiratory infections, eating disorders, drug and alcohol abuse, coronary heart disease, anxiety, depression, apprehension, fear, anger, feelings of inadequacy or numbness, cognitive impairment, poor decision-making, apathy, burnout, and participation in unhealthy coping behaviors. In 2008, nearly one-third of Americans reported their

average stress level as “extreme,” placing them at risk for experiencing negative health consequences, including premature death (Keller et al., 2012).

It should be noted that stress is an individualized experience related to a person’s perceived stress and ability to adapt to stressors. This makes stress to intrinsically be both a cause and an effect. Personality traits have been suggested as an explanation for variable reports of stress levels among individuals in similar life situations, with availability of social support, self-esteem, perceived locus of control, and a state of psychological well-being identified as stress mediators when dealing with daily hassles (Barker, 2011).

A recent study by Keller et al. (2012) examined the relationship among stress level, perception that stress affects health, and health status self-reported by 186 million American adults as part of the 1998 National Health Interview Survey. Respondents reporting high levels of stress and a perception that stress affects health were two to four times more likely to report their health status as “poor” and experienced a 43% greater risk of premature death than those who reported lower levels of stress and no perception that stress affects health. This is of special interest to nurses and nursing students, who are informed in the health consequences of stress as part of their professional education.

### **Perceptions of Stress Among Nurses**

At the start of their careers nurses often experience increased levels of stress due to lack of confidence and exposure to unfamiliar situations (Chang & Hancock, 2003; Chang et al., 2005). To identify sources of role stress among new nurses and the effect of time, Chang and Hancock (2003) surveyed newly graduated Australian nurses at 2 to 3 months after graduation and again at 10 to 11 months. One hundred fifty-four graduates

responded to the initial survey; 110 responded to the follow-up survey. Findings indicated that role ambiguity was the major source of stress early on and role overload was the major source later on. Of the two, role ambiguity had the greater impact on job satisfaction and likelihood of leaving the organization (Chang & Hancock, 2003).

In a subsequent study, Chang et al. (2005) reviewed the international literature on role stress in nurses, noting commonalities reported in studies from the US and UK, the two countries that predominated the literature. Among the contributing factors to role stress cited in the literature were the aging of nurses, nursing shortages, and workplace violence. Intimidation from physicians and lack of institutional support were also identified as sources of increased stress. The authors' recommendations included strategies to reduce role stress, such as stress education, continuing education, and flexible scheduling, and a call for more studies to evaluate their effectiveness (Chang et al., 2005).

In a longitudinal study conducted by Watson et al. (2009), nursing students were followed over 3 years, from role of student to that of nurse. Participants provided demographic information and completed surveys that measured stressful life events, work-related stress, and general health. Data were collected at four different points in time over the three-year period. A total of 192 out of 359 original participants completed the study. Highest stress levels were reported by newly employed graduate nurses. Watson et al. note that this "points to a critical period . . . where psychological distress may lead to work-related illness and attrition" (p. 277). Over time, stress levels of new graduates fell to the level of that of nursing students (Watson et al., 2009).

As the studies reviewed in this section indicate, role stress is common among nurses and not unique to nurses in the United States. In the work setting, work overload, ambiguous role responsibilities, and inadequate support are contributing factors. Evidence supports that role stress peaks during the first nursing job as a newly graduated nurse but begins while still a nursing student. The perceptions of stress among students in general and student nurses specifically will be reviewed in the next sections.

### **Perceptions of Stress Among Students**

Results of many studies conducted to examine perceptions of and reactions to stress among college students are reported in the literature. While most can agree it is a very stressful time in a person's life, identifying triggers and learning ways to manage stress can affect a student's outcomes. In Conley, Travers, and Bryant's (2013) quasi-experimental cohort-controlled study, 51 freshman undergraduate students were exposed to an educational program to promote psychosocial wellness. The intent of the intervention was to determine the seminar's effectiveness in preparing students to manage stress and adjust psychosocially. Through the study, the researchers found teaching college students ways in which to manage their stress can help students, both with problems in the future and with current stressors that make up a college student's life (Conley et al., 2013). A student's ability to cope in a stressful situation can help to determine his or her outlook and approach to a situation (Conley et al., 2013).

In their study, Mahmoud, Staten, Hall, and Lennie (2012) examined adaptive versus maladaptive strategies to coping with stressful situations as well as their impact on the college student. To this end, the researchers conducted a cross-sectional survey study; 508 out of 1,700 undergraduate students responded to the mailed surveys. On

analysis the researchers determined that use of maladaptive coping strategies, such as avoiding the problem and not seeking help or support, were significant predictors of depression, anxiety, and stress. An unexpected finding was that adaptive coping strategies, such as facing the source of stress head on, seeking help, and solving the problem, had no association—positive or negative—with depression, anxiety, or stress. The significance of the latter finding is that interventions to help students cope with stress typically focus on teaching adaptive coping strategies, which may not be the most effective method. The researchers concluded that the development and study of strategies to minimize the effects of maladaptive coping is needed (Mahmoud et al., 2012).

Students' self-reported levels of stress are just one measure; physiologic effects of stress have also been demonstrated through research. Lee, Wuertz, Rogers, and Chen (2013) recruited 103 female college students enrolled in the college of health professions at a university in the southern United States. The researchers hypothesized that “women with poor sleep have adverse health outcomes such as increased fatigue severity, daytime sleepiness, depressive symptoms, and more physical symptoms than women with good sleep” (Lee et al., 2013, p. 2). The researchers limited their study population to females based on a review of literature that favored females as demographically being the most affected by sleep disturbances. For the study, a convenience sample of 103 participants completed a 7-day sleep diary in addition to the Perceived Stress Scale (PSS); three scales specific to general sleep habits, sleep quality, and daytime sleepiness; the Center for Epidemiologic Studies Depression Scale; the Numerical Rating Scale for Fatigue; and the Physical Symptom Inventory. Results indicated high global stress, as reported on the

PSS, was common to the study participants. On further analysis, women reporting more overall stress also reported more sleep dysfunction, fatigue, depression, and physical complaints. The researchers note that “these findings highlight a critical need for preventive care for college women” (Lee et al., 2013, p. 857).

The studies reviewed in this section highlight the role stress plays in the lives of college students. Stress is an expected part of the academic experience and compounded by life events. The effects of stress, such as depression, anxiety, sleep disturbances, and physical symptoms, become an additional stressor. The nature of the degree and type of academic setting can also play a role, as is the case with nursing students, which will be reviewed in the next section.

### **Perceptions of Stress Among Undergraduate Nursing Students**

Nursing students are faced with unique challenges not experienced by students in other fields. For one, the clinical setting is a unique feature of health care related education programs that is difficult to prepare for and is commonly associated with fear and anxiety. All student clinical settings are new experiences designed to teach a previously unknown skill and to put theory learned into practice. As nursing experiences build into the clinical arena and become entwined with current life situations, the impact on stress becomes compounded when stress relief activities are not prioritized and instead are exchanged for demands of coursework and sources of stress related family life and employment. For this reason, stress and its effects among nursing students has been a growing topic of interest.

The effect of stress on academic performance was the focus of a study by Goff (2011). Goff conducted an explanatory correlational study of 53 primarily full-time



baccalaureate nursing students (50 juniors and 3 seniors ranging in age from 20-54 years with a mean age of 24.83 years) with the intent of examining how learned resourcefulness impacted the relationship of personal and academic stressors on academic performance. Demographic data including age, gender, race, marital status, work status, and enrollment status were obtained along with the participants' grade point average for the previous semester. The Student-life Stress Inventory was employed to allow participants to rate their stress level in five categories (frustrations, conflicts, pressures, changes, self-imposed), as well as their overall stress level, and to rate their reactions to the stressors in four categories (physiological, emotional, behavioral, cognitive). The Self-Control Schedule was used to assess participant behaviors in the area of learned resourcefulness, defined as personal behaviors that interrupt stressors to create a return to a normal state through a combination of problem-solving, delayed gratification, emotion, and intellect. Goff found that the baccalaureate nursing students experienced elevated personal and academic stressors consistent with previous research, citing deadlines (M=4.31, SD=0.66), task overload (M=4.11, SD=0.83), competition (M=4.0, SD=1.00), test anxiety (M=3.75, SD=1.05), and daily hassles (M=3.17, SD=0.83) as the leading sources of stress (Goff, 2011). However, unlike previous research, stressors were not found to be a significant indicator of academic performance ( $p=0.90$ ), though age and academic performance continue to demonstrate a positive correlation ( $p<0.10$ ). This study was limited by a small sample size confined to one college program and program level (Goff, 2011).

With a broader focus, Chernomas and Shapiro (2012) conducted a cross-sectional exploratory descriptive study to investigate the prevalence, contributing factors, and

effects of stress, depression, and anxiety in students attending a baccalaureate nursing program in Canada. Study participants had completed the first year of university study and represented all three final years of study in the nursing program. Invitations to participate were emailed to 882 students, with 437 completing the Depression Anxiety Stress Scale, demographic information, a quality of life scale, and an open ended question asking for the participants to elaborate on their experiences.

Results support Chernomas and Shapiro's (2012) premise that "the demands of juggling studies with employment, family life, and other responsibilities interfere with students abilities to receive the needed social support and relaxation that interpersonal connections provide" (p. 256). When compared to data from a large study involving a mixed sample of university students and adults in the workforce, female nursing students in the Chernomas and Shapiro study reported higher levels of all three variables—depression, anxiety and stress—and male nursing students reported higher levels of depression and anxiety, although not stress. For each variable, coping skills were a significant predictor. Contributing factors derived from responses to the open ended question included difficulty balancing coursework with the demands of family life, feeling unprepared and stressed over clinical practice, and struggles involving finances and the ability to meet personal needs. Despite these challenges, the majority of respondents indicated they were satisfied with their overall health and quality of life. In light of these findings, Chernomas and Shapiro recommend greater recognition by nurse educators of the prevalence of depression, stress, and anxiety and their effects among baccalaureate nursing students. They also suggest a proactive stance, noting that "it is important to ensure potential students are well aware of program expectations, so they

can better plan for this intense time of learning and development as professionals” (Chernomas & Shapiro, 2012, p. 264).

How baccalaureate nursing students cope with stress was also the focus of a study conducted by Reeve et al. (2013). Participants in this case included traditional and second degree baccalaureate nursing students enrolled at a private university. One hundred seven students agreed to participate—49 traditional students and 58 second degree students; the majority (97%) were female. Using a web link distributed in class, participants provided demographic data and completed five survey tools: the Multidimensional Scale of Perceived Social Support, Deakin Coping Scale, Social Support Questionnaire, the Student Life Stress Inventory, and Critical Incident Technique. Analysis was both quantitative and qualitative. Results indicate similar levels of stress in traditional and second degree students. Use of coping strategies was also similar in both groups with notable exceptions of more traditional than second degree students indicating ignoring their stress and using alcohol to excess. Qualitative data provided insight into clinical experiences. Common themes were feelings of rejection (by clinical faculty, staff nurses, patients, peers) and inadequacy/incompetence. On the positive side participants identified multiple sources of support available to them, such as peers, family members, friends, and faculty, and use of coping strategies ranging from exercise to meditation. As with other studies, the researchers recommend increased awareness of stress in nursing students and further research in a variety of nursing programs (Reeve et al., 2013).

In a more recent study, Wolf, Stidham, and Ross (2015) compared predictors of stress and coping strategies between generic baccalaureate nursing (BSN) students and

accelerated nursing students enrolled in the third and fourth years of study at two universities located in Midwestern United States. Study participants included 75 accelerated and 135 generic BSN students. Participants completed demographic questions, the Perceived Stress Questionnaire, Rosenberg Self-Esteem Scale, Multidimensional Scale of Perceived Social Support, and open ended questions related to personal concerns and coping. Results indicated that senior level students with a history of depression, lower self-esteem, and lack of social support had higher levels of stress. Like the Reeve et al. (2013) study, there was no significant difference in levels of stress between accelerated versus generic students. Qualitative findings were also common to both types of students. These included fear of failure (classroom, clinical, graduating, NCLEX), not getting along with faculty, and time management. Accelerated students (63%) were more likely than generic students (39%) to engage in positive thinking as a coping strategy. As with other studies, the researchers recommend greater recognition of stress in nursing students and implementing programs to reduce stress (Wolf et al., 2015).

Studies reviewed in this section described the prevalence and effects of stress in accelerated and baccalaureate nursing students. In general, high levels of stress are reported, particularly by female students. Common sources of stress include those related to academics (competition, feeling inadequate, fear of failure) as well as those related to the competing demands of daily life (time management, finances, daily hassles). As a result of stress, students have experienced depression, anxiety, and sleep disturbances. Coping strategies employed by students range from those that are maladaptive, such as avoidance, to those that are adaptive, such as facing the stressors head on and seeking

help. Researchers agree on the importance of identifying the factors associated with stress in nursing students.

### **Perceptions of Stress in Advanced Practice Nursing Students**

Studies on stress perceptions among students pursuing advanced degrees in nursing are limited. Reviewed in this section will be one study involving graduate level nurse practitioner students and two studies investigating the effects of stress in student nurse anesthetists.

In response to a lack of studies on graduate level nurses, Maville et al. (2004) conducted a qualitative study involving 12 graduate level nurse practitioner students in the final year of their program. Study participants provided demographic information and responded to interview questions regarding their levels of stress; levels ranged from above average (50%) to the highest they've ever experienced in their life (41.7%). Self-reported contributing factors included the demands of self-directed learning, financial concerns, and how to find time for others. The researchers concluded that "a sense of being uncomfortable should be expected as NP students transition from the student role to the new role of independent practitioner" (p. 262). As a result, they add, faculty need to recognize these student perceptions and develop strategies to ease the transition (Maville et al., 2004). The limitations of this study are the small number of study participants and age of the study.

More recent studies of stress in advanced practice nursing students have focused on student nurse anesthetists. McKay, Buen, Bohan, and Maye (2010) investigated the relationship between physiologic evidence of stress and performance by student nurse anesthetists in a simulated activity to intubate a mannequin in a controlled setting of a

simulation center. A convenience sample of 18 men and women enrolled in the Uniformed Services University nurse anesthesia program, participated in the study. Their prospective, descriptive, comparative study measured the production of salivary  $\alpha$ -amylase which increases during moments of sympathetic stimulation, such as stressful events. Prior to the simulated activity baseline samples of saliva for  $\alpha$ -amylase were collected as were measurements of blood pressure, heart rate, and pulse oximetry; the presence of sweat was also noted and participants completed demographic forms and trait anxiety surveys. Measurements and surveys were repeated after the intubation activity was concluded (McKay et al., 2010).

The results of the McKay et al. (2010) study revealed that  $\alpha$ -amylase production increased 68.8% in post activity samples. The correlation to other physiological responses remained consistent with those findings but not to such a vast degree; heart rate increased by 14% and a perceived level of stress had a 28% increase. The effect of stress on the ability to perform the intubation activity was not as predicted. “Analysis of the descriptive statistics and means of each group suggests that low performers have increased stress and perform poorly, whereas high performers have increased stress and perform superbly” (McKay et al., 2010, p. 301).

The researchers note several limitations of their study. Sample size was small. In addition, life stressors were beyond their control and need to be considered in the analysis. The researchers also recognize that stress is a personal experience. For example, the activity itself or the presence of faculty may have been a stressor for some students but not others. Nevertheless, their research supports that physiologic effects of

stress are measurable although “variable among performance groups” (McKay et al., 2010, p. 306).

In another study involving student nurse anesthetists, the impact of life stressors was a consideration. Chipas et al. (2012) conducted a descriptive study that explored stress perceptions, manifestations, and coping mechanisms of student nurse anesthetists. Chipas et al. recruited study participants by sending an invitation to 1,353 members of the American Association of Nurse Anesthetists. Members included working nurse anesthetists as well as students; the invitation yielded responses from 1,282 student registered nurse anesthetists who were the focus of this arm of the study. The large sample size represented 25.6% of all students enrolled in nurse anesthesia programs (Chipas et al, 2012).

Respondents completed an online questionnaire on stress and its effects that was developed by the primary researcher as part of an earlier study. The majority of respondents were married (65.5%), female (66.6%), and white (87.3%). Self-reported levels of stress were highest for females, divorced versus single or married students with or without children, and for black/African American and Hispanic versus white students. Stress levels were also highest for students enrolled in programs that integrated clinical with didactic content. Age was not identified as a factor contributing to stress (Chipas et al., 2012).

The effects of stress in student nurse anesthetists were evident in responses to questions related to depression and to reports of physical complaints. Nearly half (47.3%) of respondents indicated being depressed while a student and 21.2% reported suicidal ideation. There was no significant difference between males and females.

Physical complaints/stress symptoms included feeling anxious, being easily annoyed, GERD, back/neck pain, and sleep disturbances. Respondents identified external stressors which included childbirth, death of a family member, change in marital status, and injury. Professional help with coping with stress was being sought by many respondents, with 17.1% taking prescription medication. Respondents indicated a number of other coping strategies, ranging from those that were maladaptive (self-criticism, giving up on coping, or use of drugs or alcohol) to those that were adaptive (meditating, reading, seeking professional help). Of note, respondents who de-stressed by exercising several times per week had lower levels of stress than those who did so infrequently. The researchers emphasize the need to identify high levels of stress in student nurse anesthetists and promote effective coping strategies to ensure the safety and well-being of the students and their patients (Chipas et al., 2012).

As with the studies involving baccalaureate students, studies reviewed in this section support that stress is a ubiquitous phenomenon that affects nursing students across all levels of education. The purpose of the present study is to add to the evolving body of study on this topic.

### **Theoretical Framework**

Tsai's (2003) Theory of Caregiver Stress is a middle range nursing theory that predicts stress and its effects in caregivers. The theory builds on the Roy Adaptation Model, where the individual is constantly using coping skills to adapt to the stressors in the environment. Tsai essentially applies the Roy Adaptation Model to caregivers of chronically ill individuals.



The Theory of Caregiver Stress borrows Roy's humanist knowledge. Tsai (2003) theorized that every person has a range of coping abilities to stressful events. An individual's response to stress is determined by an environmental stimulus (the type or amount of stress) and the ability of the individual to adapt and not allow the environmental stimuli to affect their physical abilities. Levels of caregiver stress can be predicted based on specific factors such as race, age, gender, relationship status, objective burden, social roles, presence or lack of social support, and other stressful life situations. The theory assumes that caregivers' perceptions help determine their responses to changes in their environment. This process has three major phases: input, control, and output. In the input phase, individuals experience environmental factors that have the potential to increase or decrease stress. In Tsai's application to caregivers for the chronically ill, these factors include caregivers' perception of the burden of caregiving, demographic information, stressful life events outside of the caregiving experience, and presence or lack of social support systems (Tsai, 2003). The control phase centers on the caregivers' responses to input in the form of coping mechanisms, which can be positive or negative. In the output phase, caregivers' adaptive or ineffective responses can be measured based on their level of functioning in the areas of physical function, self-esteem, role enjoyment, and marital satisfaction. High ratings in these categories suggest an adaptive or positive response; low ratings reflect an ineffective or negative response (Tsai, 2003).

Application of Tsai's theory has been limited to caregivers as family members. Specific studies have included a case analysis involving an advanced practice nurse's role in facilitating a family's decision to discontinue a parent's dialysis (Dethloff, 2004) and

more recent studies involving family caregivers' experiences with family members with chronic diseases such as dementia (Lewis, 2014), Parkinson's (Drutyte, Forjaz, Rodriguez-Blazquez, Martinez-Marin, & Breen, 2014), and heart failure (Hwang, Fleishman, Howie-Esquivel, Stotts, & Dracup, 2011).

No studies were found applying Tsai's theory to nurses or nursing students as the caregiver. Our study's application of the theory proposes that nursing students are in the role of caregiving in numerous forms. Assuming online undergraduate and graduate nursing students are actively employed as registered nurses throughout the duration of their education, each student is experiencing the stress of providing care to patients as both the registered nurse (while at work) and at the professional nursing or advanced practice (while at clinical) level. In addition, multiple potential environmental factors, such as family obligations/conflict, perceived social support, lack of leisure time, and financial difficulties, may contribute to increased levels of stress for nursing students. In this respect the experience of professional caregiving may parallel the experience of non-professional caregiving, with a similar adaptive response process. This would qualify as the input phase in our application of the theory. The coping mechanisms utilized by students to attempt to adapt to a heightened level of stress reflect the control phase. The output phase remains much the same as in Tsai's theory (2003), with the possible addition of academic success and a self-reported sense of work- education-life balance as a measure of adaptive versus ineffective stress responses. This study proposes that Tsai's Theory of Caregiver Stress:

- Transcends the caregiving environment

- Is applicable to the experience of stress in individuals attempting to navigate multiple major life changes simultaneously
- Can be modified to identify factors relevant to the input phase of stress response in a variety of subpopulations
- Can be used to predict levels of stress in a specific subpopulation based on the presence or absence of identified relevant factors.

### **Summary of the Review of Related Literature**

Although stress is individualized and it is difficult to predict which elements an individual might perceive as stressful, it is well documented that regardless of the stress factor, most stress will have a direct negative impact on a person's perception of health or their actual health status. The general nature of the work of nursing students is expected to be stressful, and students' ability to recognize stress is often clouded by the expectations of nursing programs. This combination leads to a general inability of nursing students to recognize stress factors and limit the health effects associated with them.

With the application of Tsai's Theory of Caregiver Stress this study will attempt to predict levels of stress in nursing students based on the presence or absence of identified relevant factors. The utilization of standardized research instruments will be incorporated to collect reliable data.

## **Chapter 3**

### **Methodology**

#### **Research Design**

This study is a quantitative, non-experimental, descriptive correlational study to determine the perceived level of stress in nursing students in relation to recent life experiences. We examined an existing condition (recent life experiences) without manipulation of variables (perceived stressors), and attempt to describe the association between the two variables. This study is non-experimental since it does not attempt to manipulate the source of stress, but find how the stress occurs in the natural, unaltered setting of graduate and undergraduate nursing student in relation to recent life experiences.

#### **Setting**

Due to the online nature of the survey, this study took place in any setting accessible to an internet connection. Although all participants were enrolled in an online nursing program physically located in Western Pennsylvania, the participants' physical location was not restricted to that locale.

#### **Sample**

Study participants consisted of a convenience sample solicited from all full- and part-time nursing students enrolled fall 2015 in an online RN to BSN completion program and an online MSN program at a public university located in Western Pennsylvania. As of fall 2015, 161 students were enrolled in the RN to BSN program and 122 students were enrolled in the MSN program. The final sample of 51 RN to BSN

students and 33 MSN students was convened over a one month period, yielding response rates of 32% and 27% respectively.

### **Ethical Considerations**

Both researchers completed the Collaborative IRB Training Initiative (CITI) tutorial on the ethical principles regulating the research of human subjects and adhered to these principles in the development and conduct of the study. Approval to conduct the study was obtained from the Clarion University Institutional Review Board (Appendix A). Furthermore, all necessary permissions were obtained. Permission to use the surveys selected for this study were granted by the surveys' authors through postings to websites with the understanding that student researchers will use the surveys as written. Access was granted for the Survey of Recent Life Experiences at <http://www.yorku.ca/rokada/psyctest/> and for the Perceived Stress Scale at <http://www.mindgarden.com/documents/PerceivedStressScale.pdf>. Permissions to access student listservs to distribute invitations to participate in the study were obtained from the coordinators of each nursing program (Appendix B).

Data collection made use of surveygizmo, online survey software that is in compliance with HIPAA and the US-EU Safe Harbor Framework (see <http://www.surveygizmo.com/privacy/#safeharbor>). The invitation to participate in the study (Appendix C) assured participants that no identifying information would be collected and that responding to the survey was voluntary and that confidentiality would be maintained. Participants' survey responses were retrieved from secured servers at surveygizmo. Only the researchers had access to the password protected survey results

and data that was retrieved will be kept in a locked file for a period of three years, at which time it will be destroyed.

### **Instrumentation**

Two published research instruments were utilized to collect data. In addition, a brief, seven question researcher-designed demographics survey was administered to obtain information that to describe the sample, including age, gender, marital status, years worked as an RN, program level, and enrollment status (full-time or part-time enrollment).

The Perceived Stress Scale (PSS) was developed in 1983 as a method for researchers to measure the degree of subjective stress felt by individuals in response to an objectively stressful event (Cohen, Kamarck, & Mermelstein, 1983). Cohen et al. (1983) identified the gap between existing stress measurement scales that focused on numerical, objective, observed data while ignoring the interactions between person and environment. They set out to create a scale that would allow the participant to respond in a way that acknowledges the relationship between individual coping skills, available resources, and stress level (Cohen et al., 1983). Three separate studies testing the reliability and validity of the instrument were completed, two using groups of college students and one using a smoking cessation group. Groups were administered both the PSS and a number of other existing stress scales and results were compared. Coefficient alpha reliability for the PSS was found to be .84, .85, and .86 in each respective sample. A correlation of .18-.36 was found between the PSS and existing scales, with “adequate internal and test-retest reliability” (Cohen et al., 1983, p.392). The PSS has since been translated into 28 languages and modified by its original author to include both a 14-question and 10-

question version. It is currently the most widely used survey to measure self-perceived levels of stress and has been correlated with failure to quit smoking and occurrence of symptoms of situational depression (Mindgarden, 2014).

The variation of the PSS (Appendix D) employed in our study is a ten-item questionnaire utilizing a 5-point Likert scale designed to measure how “unpredictable, uncontrolled, and overloaded respondents find their lives” by rating how often in the last month they have felt the way described in each question (0 = never, 1 = almost never, 2 = sometimes, 3 = fairly often, 4 = very often) (Mindgarden, 2014). This scale is general, easily applied to subpopulations of any type, written at a junior high level, and requires approximately 5-10 minutes to complete. This scale allowed us to measure the degree of stress felt by our sample, and gave us the opportunity to correlate self-perceived levels of stress with the presence of stress factors identified in the second survey instrument.

Our second instrument is the Survey of Recent Life Experiences (Appendix E). This scale was developed in 1991 as a method of measuring an individual’s exposure to potential stress-inducing events while eliminating possible contamination due to the assumption that all listed events are inherently stressful – a major flaw found in every preceding life experiences scale (Kohn & Macdonald, 1992). Kohn and Macdonald (1992) developed two scales to address this issue, the Inventory of College Students’ Recent Life Experiences (ICSRLE) and the Survey of Recent Life Experiences (SRLE), which focuses more generally on the adult population. We chose to utilize the SRLE over the ICSRLE in our study due to the large number of non-traditional, adult learners found in nursing undergraduate and graduate student programs.

The SRLE utilizes a 4-point Likert scale asking respondents to rank how much each of the 51 listed “adult hassles” has affected them in the last month (1 = not at all, 2 = only slightly, 3 = distinctly, 4 = very much). Examples of hassles include: maintaining a home, family conflict, and lack of leisure time (York University, 2014). This instrument allows respondents to self-report the presence, absence, and degree of each listed stressor on their daily lives over the last month. The 51 questions were chosen from a pool of 92 items as those showing the most significant positive correlation with Cohen’s Perceived Stress Scale with a correlation of .17 ( $p < .05$ ) to .46 ( $p < .01$ ), creating an indirect relationship between the SRLE and stress assessment (Kohn & Macdonald, 1992). In a sample of 236 walk-in volunteer subjects (100 in a randomized item-selection subsample and 136 in a cross-replication subsample, mean age of 27.57), the alpha reliability of the SRLE in the item-selection subsample was .92 with a PSS correlation of .57 ( $p < .01$ ). Alpha reliability was .91 with a correlation with the PSS of .60 ( $p < .01$ ) in the cross-replication sample. Of the 51 questions, ten fail to fall into one of the six “factor” categories of social and cultural difficulties, work, time pressure, finances, social-acceptability, and social victimization. These questions are marked on the questionnaire and may be omitted with a slightly decreased alpha reliability of .90 and correlation with the PSS of .55 ( $p < .01$ ) (Kohn & Macdonald, 1992). While Kohn and Macdonald (1992) did not report an exact timeframe for taking the SRLE, volunteer subjects in the initial research were advised to anticipate spending 20-30 minutes taking the full survey. We utilized the shortened form of the survey to account for the inclusion of the ten-item Perceived Stress Scale, requiring respondents to answer only 58 questions between the two standardized surveys and the demographics survey.



Limiting both instruments to the timeframe of the preceding month allowed us to gather data on concurrent levels of stress and specific associated stressors experienced by our sample population. The data was then used to identify the stressors most commonly associated with an increased level of stress and to determine if a correlation exists.

### **Data Collection**

The Perceived Stress Scale, Survey of Recent Life Experiences, and demographic surveys were uploaded into surveygizmo. An invitation to participate in the study was then distributed via two student listservs, one for students enrolled in the RN to BSN program and one for students enrolled in the MSN program. The invitation included all consent information and a link to the survey; completion of the online survey was considered consent to participate in the study. After each survey was completed and submitted, answers were secured and stored on the surveygizmo servers for later retrieval by the researchers. A second invitation was sent 10 days after the first email distribution. Data collection was completed in one month.

### **Summary of Methodology**

In order to determine students' perceived levels of stress in relation to recent life experiences, a quantitative, non-experimental, descriptive correlational design was used. Standard and reliable research instruments, the Perceived Stress Scale and Survey of Recent Life Experiences, as well as a researcher-designed demographic survey, were posted in a secure online environment. Invitations to participate in the survey were distributed through student listservs with the permission of the program coordinators. Students implied consent to participate in the study by completing and submitting the

surveys which were then retrieved by the researchers for analysis. Chapter 4 will describe the results.

## **Chapter 4**

### **Results and Discussion**

The purpose of this study was to examine whether a relationship exists between recent life experiences and perceived stressors in students enrolled in online RN to BSN and MSN programs delivered by a public university in Western Pennsylvania. This chapter describes and analyzes the findings of this descriptive study within the context of the literature and Tsai's Theory of Caregiver Stress. Limitations will also be described.

#### **Characteristics of Study Participants**

As shown in Table 2, 86 surveys were initially returned to us; 53 by RN to BSN students and 33 by MSN students. Incomplete surveys were eliminated from analysis, leaving 65 respondents (22 MSN; 43 RN-BSN). Among RN to BSN students, the highest proportion of respondents were between the ages of 34-44 (30.23%), female (86.05%), married (69.77%), had more than 6 years' employment as an RN (69.77%), and were enrolled part-time (83.72%). Results were similar for MSN students, with the highest proportion of respondents reporting an age of 34-44 (40.91%). Again, the majority were female (90.91%), married (77.27%), had more than 6 years' employment as an RN (72.73%), and were enrolled part-time (90.91%).

Table 2

*Frequency Distribution of Demographic Variables by Nursing Program*

<i>Demographic Item</i>	<i>Nursing Program</i>			
	<i>MSN</i>		<i>RN-BSN</i>	
	<i>(n = 22)</i>		<i>(n = 43)</i>	
	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>
<i>Age at Survey</i>				
<i>Under 25</i>	1	4.55	4	9.30
<i>25-33</i>	7	31.82	11	25.58
<i>34-44</i>	9	40.91	13	30.23
<i>45-54</i>	3	13.64	10	23.26
<i>54-65</i>	2	9.09	5	11.63
<i>Gender</i>				
<i>Female</i>	20	90.91	37	86.05
<i>Male</i>	2	9.09	6	13.95
<i>Marital Status</i>				
<i>Divorced</i>	3	13.64	4	9.30
<i>Married</i>	17	77.27	30	69.77
<i>Single</i>	2	9.09	9	20.93
<i>Years of RN Employment</i>				
<i>&lt;1 year</i>	.	.	2	4.65
<i>2-3 years</i>	.	.	8	18.60
<i>4-5 years</i>	6	27.27	3	6.98
<i>6-10 years</i>	3	13.64	16	37.21
<i>&gt;10 years</i>	13	59.09	14	32.56
<i>Enrollment Status</i>				
<i>Full Time</i>	2	9.09	7	16.28
<i>Part Time</i>	20	90.91	36	83.72

## Perceived Level of Stress

Respondents' perceived level of stress was measured using the Perceived Stress Scale (PSS) as shown in Tables 3 and 4. The PSS is a standardized survey where respondents rate how they felt in 10 situational survey items by answering that they "never," "almost never," "sometimes," "often," or "very often" have experienced the feelings described in the survey question. For analysis, ratings were coded on a 5 point Likert scale ranging from 0 (never) to 4 (very often), except on the non stress questions where the Likert scale is reversed 0 (very often) to 4 (never).

Mean ratings for RN-BSN students ranged from 1.55 to 2.18. The highest ratings were for items that indicate, in the previous month, students "sometimes" to "often" felt "confident about [their] ability to handle [their] personal problems" (m = 1.32) and "able to control irritations to" (m = 1.51) yet were also "nervous and stressed" (m = 2.18). For the same time period, RN-BSN students indicated they "almost never" or only "sometimes" felt that "difficulties were piling up so high that [they] could not overcome them" (m = 1.55) and "[they] could not cope with all the things that [they] had to do" (m = 1.58). It seems for RN-BSN students that stress is a recognizable and known factor and that coping strategies are adequate for these students as they very rarely feel overcome by stress.

Mean ratings for MSN students ranged from 1.50 to 2.68. The mean results were comparable to that of the RN-BSN group. The highest ratings were for items that indicate, in the previous month, students "sometimes" to "often" felt "confident about [their] ability to handle [their] personal problems" (m = 1.50), "on top of things" (m = 1.45), and "able to control irritations in [their] lives" (m = 1.59) yet also felt "nervous and

stressed” (m = 2.68). The lowest ratings for MSN students were for items that indicate, in the same time period, students “almost never” or only “sometimes” felt that “difficulties were piling up so high that [they] could not overcome them” (m = 1.50) and “[they] could not cope with all the things that [they] had to do” (m = 1.68). Like the RN-BSN students, MSN students also indicated that stress is a recognizable and known factor. Relative to the stress, coping strategies are adequate for the MSN students as they very rarely feel overcome by stress.

Table 3

*Perceived Stress Scale Survey Responses from RN-BSN Students (n=43)*

Survey Item	Responses										Mean Rating
	Never		Almost Never		Sometimes		Often		Very Often		
	N	%	N	%	N	%	N	%	N	%	
1. that you been upset because of something that happened unexpectedly.	1	2.33	7	16.28	21	48.84	12	27.91	2	4.65	2.16
2. that you were unable to control the important things in your life.	2	4.65	10	23.26	21	48.84	8	18.60	2	4.65	1.76
3. nervous and stressed.	0	0.00	4	9.30	17	39.53	16	37.21	6	13.95	2.18
4. confident about your ability to handle your personal problems.*	1	2.33	1	2.33	16	37.21	18	41.86	7	16.28	1.32
5. that things were going your way.*	1	2.33	2	4.65	22	51.16	17	39.53	1	2.33	1.65
6. that you could not cope with all the things that you had to do.	6	13.95	13	30.23	18	41.86	5	11.63	1	2.33	1.58
7. been able to control irritations in your life.*	0	0.00	4	9.30	17	39.53	19	44.19	3	6.98	1.51
8. that you were on top of things.*	0	0.00	5	11.63	20	46.51	14	32.56	4	9.30	1.60
9. been angered because of things that were outside of your control.	2	4.65	11	25.58	20	46.51	7	16.28	3	6.98	1.95
10. difficulties were piling up so high that you could not overcome them	6	13.95	16	37.21	14	32.56	5	11.63	2	4.65	1.55

\*Likert values reversed on questions related to not having stress (0=Very Often, 4 = Never)

Table 4

*Perceived Stress Scale Survey Responses from MSN Students (n=22)*

Survey Item	Responses										Mean Rating
	Never		Almost Never		Sometimes		Often		Very Often		
	N	%	N	%	N	%	N	%	N	%	
1. that you been upset because of something that happened unexpectedly.	0	0.00	4	18.18	11	50.00	6	27.27	1	4.55	2.18
2. that you were unable to control the important things in your life.	2	9.09	6	27.27	7	31.82	6	27.27	1	4.55	1.90
3. nervous and stressed.	0	0.00	2	9.09	8	36.36	7	31.82	5	22.73	2.68
4. confident about your ability to handle your personal problems.*	0	0.00	1	4.55	6	27.27	8	36.36	7	31.82	1.50
5. that things were going your way.*	0	0.00	2	9.09	12	54.55	7	31.82	1	4.55	1.68
6. that you could not cope with all the things that you had to do.	5	22.73	4	18.18	7	31.82	5	22.73	1	4.55	1.68
7. been able to control irritations in your life.*	0	0.00	2	9.09	11	50.00	7	31.82	2	9.09	1.59
8. that you were on top of things.*	0	0.00	1	4.55	11	50.00	7	31.82	3	13.64	1.45
9. been angered because of things that were outside of your control.	0	0.00	8	36.36	5	22.73	8	36.36	1	4.55	2.09
10. difficulties were piling up so high that you could not overcome them	4	18.18	8	36.36	5	22.73	5	22.73	0	0.00	1.50

\*Likert values reversed on questions related to not having stress (0=Very Often, 4 = Never)



Overall stress ratings were also determined to answer the first research question, “Is there a difference between RN to BSN and MSN students in their level of stress as self-reported on the Perceived Stress Scale?” Possible overall stress scores on the PSS range from 0 to 40, with a realized range of 11-39 in our participants. The overall mean for perceived level of stress of all participants was 23.85 (SD=6.53). RN to BSN students’ overall PSS ratings ranged from 13 to 39, with an overall mean of 23.86. MSN students’ overall PSS ratings ranged from 11 to 33, with an overall mean of 23.82 (SD=7.49). Statistical analysis failed to support that there was a significant difference ( $p = 0.9805$ ) in the ratings between RN to BSN and MSN students (Table 5).

Table 5

*Comparison of Overall Perceived Stress Scale Ratings by Program Type*

Program	Range	Mean (SD)	t-value	p-value
RN-BSN	13 – 39	23.86 (6.07)	0.02	0.9805
MSN	11 – 33	23.82 (7.49)		

Although not statistically different, a closer look at the data shows a few minor differences. RN- BSN students selected “never” more than twice as often as did the MSN students. The effect on the overall data was minor, since BSN student participants were just short of double for that of the MSN students; however, the number of “never” ratings did skew the data so that the mean answers were almost consistently greater for the MSN students in every category except when asked how often they felt “things were going their way” (item #5 on the survey tool). For this question, 5% more RN-BSN students than MSN students selected “sometimes” or “often” to this question. Although no

student indicated “never” experiencing stress over the last 30 days, 10% more MSN students than RN-BSN students selected “very often” to feeling “nervous or stressed” (item #3). These factors would lead us to believe that the amount of stress felt by MSN students is greater than that of RN-BSN students, while, at the same time, their feeling of being in control of their stress is less true for MSN students than RN-BSN students. Despite these observed differences in how often RN-BSN versus MSN students “felt things were going [their] way,” means and a t-test failed to reveal a statistical difference, as shown in Table 6.

Table 6

*Comparison of RN-BSN and MSN Responses to Feeling “Things Were Going Your Way”*

Program	Mean (SD)	t-value	p-value
RN-BSN	1.68 (0.72)	0.16	0.8713
MSN	1.65 (0.71)		

Similarly, a t-test failed to show a statistical difference between RN-BSN and MSN students’ responses to feeling “nervous or stressed,” as shown in Table 7.

Table 7

*Comparison of RN-BSN and MSN Responses to Feeling “Nervous or Stressed”*

Program	Mean (SD)	t-value	p-value
RN-BSN	2.68 (0.95)	0.53	0.5959
MSN	2.55 (0.85)		

## **Recent Life Experiences**

The Survey of Recent Life Experiences has 41 survey items that ask participants to rate how much common conflictual situations affected them in the previous month. Possible responses ranged from 1 = not at all part of my life to 4 = very much part of my life. Survey responses by RN to BSN students (Table 8) show mean ratings for RN-BSN students ranged from 1.11 to 3.11. Items RN-BSN students indicated experiencing to the greatest extent in their lives for the past 30 days included #17, “a lot of responsibilities” (m = 3.11); #8, “too many things to do at once” (m = 2.90); #38, “dissatisfaction with physical fitness” (m = 2.90); and #15, “not enough leisure time” (m = 2.88). The lowest ratings by RN-BSN were for experiencing items #3, “ethnic or racial conflicts” (m = 1.11) and #11, “having your trust betrayed by a friend” (m = 1.23). These findings suggest that the RN-BSN students’ lives are most affected by the items that increase their workload or amount of responsibility, or factors that limit their ability to find time for themselves or to incorporate stress relieving activities.

Mean ratings for MSN students (Table 9) ranged from 1.04 to 3.59. The mean results were comparable to that of the RN-BSN group. Items MSN students indicated experiencing the most in the previous 30 days included #17, “a lot of responsibilities” (m = 3.59); #8, “too many things to do at once” (m = 3.18); and #15, “not enough leisure time” (m = 2.95). The lowest ratings by MSN students were for experiencing #3, “ethnic or racial conflicts” (m = 1.04) and #5, “being let down or disappointed by friends” (m = 1.09). These findings suggest that MSN students’ lives are most affected by the same experiences that affect the BSN students: too much work and too little time for self-care.

Table 8

*Survey of Recent Life Experiences Responses by RN-BSN Students*

Experience Over The Last Month	Responses									
	Not at all		Only slightly		Distinctly		Very much part		Mean Rating	
	part of my life		part of my life		part of my life		of my life			
	(1)		(2)		(3)		(4)			
f	%	f	%	f	%	f	%			
1. Disliking your daily activities.	9	20.93	25	58.14	6	13.95	3	6.98	2.06	
2. Disliking your work.	8	18.60	25	58.14	8	18.60	2	4.65	2.09	
3. Ethnic or racial conflict.	39	90.70	3	6.98	1	2.33	0	0.00	1.11	
4. Conflict with in-laws or boyfriend/girlfriends family.	27	62.79	11	25.58	5	11.63	0	0.00	1.48	
5. Being let down or disappointed by friends.	21	48.84	17	39.53	4	9.30	1	2.33	1.65	
6. Conflict with supervisor(s) at work.	20	46.51	17	39.53	6	13.95	0	0.00	1.67	
7. Social rejection.	32	74.42	10	23.26	1	2.33	0	0.00	1.27	
8. Too many things to do at once.	0	0.00	15	34.88	17	39.53	11	25.58	2.90	
9. Being taken for granted.	11	25.58	17	39.53	11	25.58	4	9.30	2.18	
10. Financial conflicts with family members.	25	58.14	12	27.91	4	9.30	2	4.65	1.60	
11. Having your trust betrayed by a friend.	35	81.40	7	16.28	0	0.00	1	2.33	1.23	
12. Having your contributions overlooked.	6	13.95	27	62.79	10	23.26	0	0.00	2.09	
13. Struggling to meet your own standards of performance and accomplishment.	6	13.95	20	46.51	12	27.91	5	11.63	2.37	
14. Being taken advantage of.	13	30.23	18	41.86	12	27.91	0	0.00	1.97	
15. Not enough leisure time.	0	0.00	14	32.56	20	46.51	9	20.93	2.88	
16. Cash flow difficulties.	11	25.58	19	44.19	8	18.60	5	11.63	2.16	
17. A lot of responsibilities.	0	0.00	7	16.28	24	55.81	12	27.91	3.11	
18. Dissatisfaction with work.	9	20.93	24	55.81	4	9.30	6	13.95	2.02	

Experience Over The Last Month	Responses										Mean Rating
	Not at all		Only slightly		Distinctly		Very				
	part of my life		part of my life		part of my life		much part of my life				
	(1)	(2)	(3)	(4)							
f	%	f	%	f	%	f	%				
19. Decisions about intimate relationship.	22	51.16	10	23.26	6	13.95	5	11.63		1.86	
20. Not enough time to meet your obligations.	6	13.95	15	34.88	17	39.53	5	11.63		2.48	
21. Financial burdens.	9	20.93	20	46.51	9	20.93	5	11.63		2.23	
22. Lower evaluation of your work than you think you deserve.	27	62.79	10	23.26	6	13.95	0	0.00		1.51	
23. Experiencing high levels of noise.	18	41.86	16	37.21	7	16.28	2	4.65		1.74	
24. Lower evaluation of your work than you hoped for.	26	60.47	13	30.23	4	9.30	0	0.00		1.53	
25. Conflict with family member.	15	34.88	22	51.16	4	9.30	2	4.65		1.83	
26. Finding your work too demanding.	15	34.88	19	44.19	4	9.30	5	11.63		1.97	
27. Conflict with friend.	31	72.09	12	27.91	0	0.00	0	0.00		1.27	
28. Trying to secure loans.	35	81.40	5	11.63	2	4.65	1	2.33		1.27	
29. Getting ripped off or cheated in the purchase of goods.	31	72.09	10	23.26	2	4.65	0	0.00		1.32	
30. Unwanted interruptions of your work.	10	23.26	19	44.19	10	23.26	4	9.30		2.09	
31. Social isolation.	25	58.14	13	30.23	3	6.98	2	4.65		1.53	
32. Being ignored.	25	58.14	18	41.86	0	0.00	0	0.00		1.41	
33. Dissatisfaction with your physical appearance.	1	2.33	20	46.51	11	25.58	11	25.58		2.74	
34. Unsatisfactory housing conditions	27	62.79	11	25.58	5	11.63	0	0.00		1.48	
35. Finding work uninteresting.	27	62.79	11	25.58	1	2.33	4	9.30		1.58	
36. Failing to get money you expected.	26	60.47	12	27.91	4	9.30	1	2.33		1.53	
37. Gossip about someone you care about.	27	62.79	15	34.88	1	2.33	0	0.00		1.39	
38. Dissatisfaction with your physical fitness.	2	4.65	14	32.56	13	30.23	14	32.56		2.90	

Experience Over The Last Month	Responses								
	Not at all		Only slightly		Distinctly		Very		Mean Rating
	part of my		part of my		part of my		much part		
	life		life		life		of my life		
(1)		(2)		(3)		(4)			
	f	%	f	%	f	%	f	%	
39. Gossip about yourself.	29	67.44	14	32.56	0	0.00	0	0.00	1.32
40. Difficulty dealing with modern technology.	24	55.81	15	34.88	4	9.30	0	0.00	1.53
41. Hard work to look after and maintain home.	7	16.28	19	44.19	12	27.91	5	11.63	2.34

Table 9

*Survey of Recent Life Experiences Responses by MSN Students*

Experience Over The Last Month	Responses									
	Not at all		Only slightly		Distinctly		Very		Mean Rating	
	part of my		part of my		part of my		much part			
	life		life		life		of my life			
(1)		(2)		(3)		(4)				
	f	%	f	%	f	%	f	%		
1. Disliking your daily activities.	5	22.73	14	63.64	2	9.09	1	4.55	1.95	
2. Disliking your work.	4	18.18	13	59.09	3	13.64	2	9.09	2.13	
3. Ethnic or racial conflict.	21	95.45	1	4.55	0	0.00	0	0.00	1.04	
4. Conflict with in-laws or boyfriend/girlfriends family.	15	68.18	4	18.18	1	4.55	2	9.09	1.54	
5. Being let down or disappointed by friends.	11	50.00	10	45.45	1	4.55	0	0.00	1.09	
6. Conflict with supervisor(s) at work.	13	59.09	5	22.73	3	13.64	1	4.55	1.63	
7. Social rejection.	18	81.82	4	18.18	0	0.00	0	0.00	1.18	
8. Too many things to do at once.	1	4.55	3	13.64	9	40.91	9	40.91	3.18	
9. Being taken for granted.	5	22.73	8	36.36	7	31.82	2	9.09	2.27	
10. Financial conflicts with family members.	9	40.91	8	36.36	4	18.18	1	4.55	1.86	
11. Having your trust betrayed by a friend.	18	81.82	3	13.64	1	4.55	0	0.00	1.22	
12. Having your contributions overlooked.	4	18.18	11	50.00	5	22.73	2	9.09	2.22	
13. Struggling to meet your own standards of performance and accomplishment.	2	9.09	10	45.45	6	27.27	4	18.18	2.18	
14. Being taken advantage of.	8	36.36	6	27.27	7	31.82	1	4.55	2.04	
15. Not enough leisure time.	0	0.00	7	31.82	9	40.91	6	27.27	2.95	
16. Cash flow difficulties.	5	22.73	9	40.91	5	22.73	3	13.64	2.27	
17. A lot of responsibilities.	0	0.00	0	0.00	9	40.91	13	59.09	3.59	
18. Dissatisfaction with work.	4	18.18	9	40.91	7	31.82	2	9.09	2.68	

Experience Over The Last Month	Responses										Mean Rating
	Not at all		Only slightly		Distinctly		Very				
	part of my life		part of my life		part of my life		much part of my life				
	(1)	(2)	(3)	(4)							
f	%	f	%	f	%	f	%				
19. Decisions about intimate relationship.	10	45.45	6	27.27	4	18.18	2	9.09		1.90	
20. Not enough time to meet your obligations.	2	9.09	11	50.00	6	27.27	3	13.64		2.45	
21. Financial burdens.	6	27.27	7	31.82	5	22.73	4	18.18		2.63	
22. Lower evaluation of your work than you think you deserve.	15	68.18	5	22.73	0	0.00	2	9.09		1.50	
23. Experiencing high levels of noise.	8	36.36	8	36.36	6	27.27	0	0.00		1.90	
24. Lower evaluation of your work than you hoped for.	15	68.18	5	22.73	0	0.00	2	9.09		1.50	
25. Conflict with family member.	7	31.82	12	54.55	2	9.09	1	4.55		1.86	
26. Finding your work too demanding.	4	18.18	13	59.09	4	18.18	1	4.55		2.09	
27. Conflict with friend.	18	81.82	3	13.64	1	4.55	0	0.00		1.22	
28. Trying to secure loans.	19	86.36	1	4.55	0	0.00	2	9.09		1.31	
29. Getting ripped off or cheated in the purchase of goods.	15	68.18	6	27.27	1	4.55	0	0.00		1.36	
30. Unwanted interruptions of your work.	3	13.64	12	54.55	4	18.18	3	13.64		2.31	
31. Social isolation.	14	63.64	7	31.82	1	4.55	0	0.00		1.40	
32. Being ignored.	13	59.09	8	36.36	1	4.55	0	0.00		1.45	
33. Dissatisfaction with your physical appearance.	4	18.18	9	40.91	7	31.82	2	9.09		2.59	
34. Unsatisfactory housing conditions	18	81.82	4	18.18	0	0.00	0	0.00		1.18	
35. Finding work uninteresting.	13	59.09	7	31.82	2	9.09	0	0.00		1.59	
36. Failing to get money you expected.	15	68.18	5	22.73	1	4.55	1	4.55		1.45	
37. Gossip about someone you care about.	13	59.09	7	31.82	2	9.09	0	0.00		1.50	
38. Dissatisfaction with your physical fitness.	2	9.09	10	45.45	6	27.27	4	18.18		2.54	



Experience Over The Last Month	Responses									
	Not at all		Only slightly		Distinctly		Very		Mean Rating	
	part of my life		part of my life		part of my life		much part of my life			
	(1)		(2)		(3)		(4)			
f	%	f	%	f	%	f	%			
39. Gossip about yourself.	16	72.73	2	9.09	3	13.64	1	4.55	1.81	
40. Difficulty dealing with modern technology.	17	77.27	3	13.64	2	9.09	0	0.00	1.40	
41. Hard work to look after and maintain home.	2	9.09	9	40.91	10	45.45	1	4.55	2.45	

Overall ratings for the SRLE were used to answer the second research question, “Is there a difference between RN to BSN and MSN students in the intensity of their life experiences in the previous month as self-reported on the Survey of Recent Life Experiences (SRLE)?” The overall SRLE rating was 77.48 (SD=15.21), with a range from 54-114. The theoretical range was 41-164. The overall mean rating on the SRLE for RN to BSN students was 77.23; the overall mean rating on the SRLE for MSN students was 77.95. Comparing these two means resulted in a t-statistic of -0.18, with an associated p-value of 0.8579 (Table 10). Therefore, we accept the null hypothesis that there is no statistical difference between RN to BSN and MSN students in their self-reported average intensity of life experiences as measured on the SRLE.

Table 10

*Comparison of Overall SRLE Ratings by Program Type*

Program	Range	Mean (SD)	t-value	p-value
RN-BSN	54-114	77.23 (16.26)	-0.18	0.8579
RN-MSN	57-109	77.95 (13.27)		

Although no significant statistical difference was found, a closer look at the data shows a few minor but interesting differences. Among MSN students, only 13.64% rated experiencing “disliking work” (item #2) as distinctly part of their lives, yet 31.82% rated “dissatisfaction with work” (item #18) as being distinctly part of their lives. The majority of RN-BSN students, on the other hand, rated the same items as only being slightly part of their lives, with percentages of 58.14% (item #2) and 55.81% (item #18), respectively. Considering that about 70% of both groups who completed the survey have at least 6 years’ experience as an RN, the increased level of dissatisfaction could be significant for motivation to achieve an advanced degree. It was also interesting to see that both groups placed heavy emphasis on body image as a contributing factor that affected their psyche. Both, the RN-BSN and MSN group, which are predominately female (86.05% and 90.91%, respectively), answered that dissatisfaction with their personal appearance and level of physical fitness was distinctly or very much a part of their lives over the period of time for the survey.

The similarity in answers between the two groups is more intriguing than the differences. Both groups were incredibly similar in their responses, identical in some,

with the largest difference being the satisfaction with their work question as mentioned above.

### **Relationship Between Level of Stress and Life Experiences**

The third research question asks, “What is the relationship between online RN to BSN and MSN students’ level of stress as measured on the PSS and intensity of their life experiences in the previous month as self-reported on the SRLE?” The related hypotheses are:

H<sub>0</sub>: There is no relationship between online RN to BSN and MSN students’ level of stress as measured on the PSS and intensity of their life experiences in the previous month as self-reported on the SRLE.

H<sub>A</sub>: There is a relationship between online RN to BSN and MSN students’ level of stress as measured on the PSS and intensity of their life experiences in the previous month as self-reported on the SRLE.

A Pearson’s correlation coefficient was used to measure the strength of the relationship between the intensity of life events and the perceived levels of stress of participants. The results show that there is a strong positive correlation between stress level and the intensity of life events ( $r = 0.60398$ ), with an associated p-value of  $<.0001$ . Therefore, we reject the null hypothesis. There is evidence from the data that students’ stress and life intensity ratings are related.

### **Relationship Between Demographic Variables and Level of Stress**

The fourth research question asks, “What is the relationship between the demographic variables (age, gender, marital status, years of experience as an RN, and

enrollment status) and level of stress as self-reported on the Perceived Stress Scale?” The related hypotheses are:

H<sub>0</sub>: There is no relationship between the demographic variables (age, gender, marital status, years of experience as an RN, and enrollment status) and level of stress as self-reported on the Perceived Stress Scale.

H<sub>A</sub>: There is a relationship between the demographic variables (age, gender, marital status, years of experience as an RN, and enrollment status) and level of stress as self-reported on the Perceived Stress Scale.

In order to assess these relationships, correlations were examined between stress and continuous demographic variables (age, years of nursing experience). The t-test was used to examine the differences in mean stress level by gender and enrollment status, and an ANOVA procedure was used to examine whether there is a difference in stress level in any of the relationship statuses.

The correlation between age and the stress rating as it was measured on the PSS was -0.0477, indicating that older students have slightly less stress. However, the result was not statistically significant, and we fail to reject the null hypothesis ( $p=0.7058$ ). There is no evidence that age and stress level have a statistically significant relationship.

The correlation between years of nursing experience and stress rating as measured on the PSS was -0.1005, indicating that students with more nursing experience have lower stress ratings. However, the result was not statistically significant ( $p=0.4257$ ), and so we fail to reject the null hypothesis. There is no evidence that years of nursing experience and stress rating are statistically significantly related.

As measured on the PSS, mean overall stress level ratings for female students were 24.25 (SD=6.30), and mean overall average stress level ratings for male students were 21.00 (SD=7.86). This resulted in a t-value of 1.32 (p=0.1902). Therefore, we fail to reject the null hypothesis. There is no evidence that students' average stress differs by gender.

Mean overall stress level on the PSS for full-time students was 24.78 (SD=7.48), and mean overall stress level for part-time students was 23.70 (SD=6.42). This resulted in a t-value of 0.46 (p=0.6483). Therefore, we fail to reject the null hypothesis. There is no evidence that students' average stress differs by enrollment status.

Finally, the ANOVA test to determine whether stress levels were different within levels of marital status rejected the null hypothesis. There was evidence that at least one of the mean stress levels for single, divorced, or married students was different (F=5.14, p=0.0086). Further investigation showed that the different between single and married average stress was significantly different. Average overall stress levels for each level of marital status are shown in Table 11.

Table 11

*Differences in Overall Mean Stress Ratings on the PSS Based on Marital Status*

Marital Status	Overall Mean (SD) Rating of Stress	F-value	p-value
Single	28.73 (6.44)	5.14	0.0086
Divorced	25.86 (5.70)		
Married	22.40 (6.13)		

## **Discussion of Results in Relation to the Literature**

Our results are consistent with previous research where it was found when nurses elect to complete a course of study, the time required to complete the demands of advanced studies usually comes at the cost of nurses denying themselves the opportunity to participate in leisurely stress relieving activities. Chernomas and Shapiro (2012) found this true with their research and stated that “the demands of juggling, studies with employment, family life, and other responsibilities interfere with students abilities to receive the needed social support and relaxation that interpersonal connections provide” (p. 256). Our results are also consistent with Reeve et al. (2013) who did not find a difference in levels of stress between 2 different groups of students. We found that the correlation between RN-BSN and MSN students level of stress and potential reasons for stress were almost identical.

Additionally our study was able to incorporate graduate students which Maville et al. (2004) found to be an underserved group in relation to results of research and their particular levels of stress. Consistent with that same premise, our participant size showed that more than 50% more RN-BSN students chose to participate in our study versus MSN students.

Demographically we did see a difference in stress level in regards to relationship status, as was the case with Chipas et al. (2012), where divorced participants reported a higher level of stress. However, our results showed that it was single participants with the higher level of stress as compared to married or divorced participants. Additionally, our results were consistent with Chipas et al. in that the majority of our participants were married women.

## **Discussion of Results in Relation to the Theoretical Framework**

Tsai's Theory of Caregiver Stress states that levels of stress can be predicted based on specific factors such as race, age, gender, relationship status, objective burden, social roles, presence or lack of social support, and other stressful life situations. While our study found demographic information to be of little significance to a student's self-reported level of stress, the homogeneity of our sample – primarily female, married RNs with greater than six years of nursing experience attending classes part-time – cannot entirely rule out the impact of these factors on stress without additional research using a more diverse sample. We did, however, find that students in both the BSN and MSN categories identified items that correspond to Tsai's concepts of objective burden and social role strain (increased workloads, increased responsibility, inability to find adequate time for themselves, and limited time for stress-relieving activities) as being present in their lives. The strong positive correlation we found between stress and intensity of life experience does support Tsai's theory that levels of stress can be predicted based on the presence of specific factors, and our proposition that the theory's application extends beyond the caregiver population.

### **Limitations**

The one month time frame to elicit subject responses was not a factor in the ability to collect a satisfactory sample size to properly conduct this study. However, the timing of the survey may have limited responses as the survey was distributed at the beginning of the Spring semester shortly after students returned from a 2 week winter break. The survey distribution was also limited to one university which could imply cultural or regional biases or beliefs about stress. Response bias is a further consideration

as there is no differentiation between traditional learners and on line learners. The perception of stress is subjective and this allows for variations in one's perception of what is stressful and what constitutes a significant life event.

### **Summary**

After reviewing the data it is apparent that the level of stress experienced is no different for registered nurses regardless of their pursuit of an undergraduate versus a graduate degree. The perceptions of stress are not significant based on factors such as the number of years of experience as a registered nurse or gender. Previous studies found that marital status was a significant factor for an elevated perceived level of stress, and that was also found to be a significant factor in our study. The only positive correlation found was between life events and perceived levels of stress which leads us to the belief that life events and experiences as a nursing student are indeed a factor in one's level of stress regardless of the type of program or nursing experience brought into the program.



## Chapter 5

### Summary, Conclusions, and Recommendations

#### Summary of Findings

Stress is a contributing factor to a number of physical medical conditions in addition to psychological alterations such as decreased concentration, difficulty remembering, apathy, and poor decision-making. RN to BSN and MSN students experience a degree of stress on the job, in the classroom, and at home that could lead to negative personal and professional consequences related to stress. This in turn may contribute to negative trends in the nursing field including job dissatisfaction, call offs, burnout, and compassion fatigue. Guided by Tsai's Theory of Caregiver Stress, this study examined whether there is a positive relationship between perceived stress level and intensity of life experiences in nursing students enrolled in a Western Pennsylvania university's RN to BSN and MSN programs.

The aim of our study was to answer the following questions: Is there a difference between RN to BSN and MSN students in their level of stress as self-reported on the Perceived Stress Scale (PSS)? Is there a difference between RN to BSN and MSN students in the intensity of their life experiences in the previous month as self-reported on the Survey of Recent Life Experiences (SRLE)? What is the relationship between online RN to BSN and MSN students' level of stress as measured on the PSS and intensity of their life experiences in the previous month as self-reported on the SRLE? What is the relationship between the demographic variables (age, gender, marital status, years of experience as an RN, and enrollment status) and level of stress as self-reported on the Perceived Stress Scale?

RN to BSN and MSN students were invited to participate in the study through emails sent to program listservs. The overall response rate of fully completed surveys was just under 23%. Participants were asked to complete the Perceived Stress Scale and Survey of Recent Life Experience reporting their stress levels and perceived stressors over the course of the previous month, as well as a short demographic survey. The correlation between stress and life events was then examined using Pearson Correlation Coefficients, ANOVA, and t-testing. We also evaluated the relationship of stress to demographic covariates of interest such as age, gender, marital status, years of nursing experience, and enrollment status. As anticipated, a strong positive correlation was found between stress level and life intensity in both RN to BSN and MSN student participants ( $p < 0.0001$ ). Outside of marital status, demographic variables were found to have no statistically significant correlation with stress levels for participants in all categories, suggesting that the single most important contributor to increased stress in nursing students is the intensity of their daily life experiences, or what would Kohn and Macdonald (1992) refer to as daily hassles.

### **Implications for Nursing**

This study's results align with previous research on the subject of stress and nurses, indicating that increased stress is present during a nurses' education and persists throughout their careers. Identifying the relationship between life experiences and elevated stress levels in students, as well as potential future research identifying specific life experiences most responsible for increased student stress, can inform strategies used by nurse educators to improve the overall satisfaction and success of nursing students. This may take the form of more flexible program designs, additional student support

services, and the addition of stress-management coursework to the curriculum. In addition, this information could be utilized by hospital management to establish improved continued education benefits for nurses returning to school while remaining in the workforce.

### **Recommendations for Further Research**

Limited research has been conducted regarding the unique stress experienced by working nurses furthering their education while remaining employed in the nursing field. The results of this study suggest that RN to BSN and MSN nursing students experience an increased level of stress during their education related to the intensity of their personal life experiences independent of age, gender, marital status, or previous work experience. Further research directed at identifying the specific life situations most responsible for increasing nursing students' stress levels, as well as the effectiveness of possible stress-reduction interventions, is necessary to fully understand this issue.

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## Appendix A

# Institutional Review Board

**DATE:** November 24, 2015

**FROM:** Rhonda Clark, Chairperson  
Institutional Review Board

**TO:** Thomas Culley  
Jennifer Jarrell

**RE:** ARA Approved

Your application for Research Approval, Examining the Relationship between Recent Life Experiences and Perceived Stressors in Nursing Students, Project No. 16-15-16, has been reviewed and approved as exempt. **Be sure that you include your IRB project number in your project cover letter and in any correspondence with the Administrative Office. Also, please include your approval number from the initial application, if submitting an addendum. Your IRB project number should appear on your informed consent and/or your survey instrument.**

Please review the following IRB policy guidelines, which cover your responsibilities as primary investigator:

**You must file written permission, which serves as consent, from the institution or facility with the Administrative Office (included in your IRB application). You must also retain all signed consent forms, if required for participation, for a period of three years after the end of the research approval period.**

**If your research extends beyond one year, you must submit a request for extension and an annual progress report.**

Principal investigators are responsible for reporting the progress of the research to the Administrative Office no less than once per year. Problems involving risks or changes in the research must be reported immediately.

**You must promptly report injury and/or unanticipated problems involving risks.** Principal investigators are responsible for promptly reporting (in writing) to the Administrative Office, through their department heads, any injuries to human subjects and any unanticipated problems, which involve risks to the human research subjects or others.

**You must report changes in the research.**

Research investigators are responsible for promptly reporting (in writing) to the Administrative Office, through their department heads, any proposed changes in a research activity.

Changes in research during the period for which IRB approval has already been given **shall not be initiated** by the research investigators **without IRB review and approval**, except where necessary to eliminate apparent immediate hazards to the subject. In such occurrence the IRB is to be notified as soon as possible.

**You must report noncompliance with this assurance.**

Research investigators and department heads are responsible for reporting promptly to the Administrative Office and the IRB any serious or continuing noncompliance with the requirements of this assurance or the determinations of the IRB.

**If your project is under continuing review (Expedited and Full-Board Applications), you may be requested to produce evidence that your research is following the guidelines provided in your application.** If your project is chosen for an audit, you will be notified.

**You must submit a research conclusion form, available on the IRB site, once your research project is completed. Please submit the research conclusion form to [irb@clarion.edu](mailto:irb@clarion.edu).**

Clarion University of Pennsylvania  
840 Wood Street, Clarion, PA 16214  
814-393-2774 (Phone)  
814-393-2825(Fax)

## Appendix B

# Master of Science in Nursing Programs

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CLARION UNIVERSITY OF PENNSYLVANIA

Graduate Office  
Phone: 814-393-2337  
Fax: 814-393-2722

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EDINBORO UNIVERSITY OF PENNSYLVANIA

Graduate Office  
Phone: 814-732-2856  
Fax: 814-732-2611

October 28, 2015

Dear IRB Committee Members:

I have granted permission for Thomas Culley and Jennifer Jarrell to use the RN-BSN listserv to disseminate invitations to undergraduate nursing students currently enrolled in Clarion's RN to Bachelor of Science in Nursing Program to participate in their survey study, "Examining the Relationship Between Recent Life Experiences and Perceived Stressors in Nursing Students."

Sincerely,



Nancy Falvo, Ph.D.  
Clarion University of PA  
School of Health Sciences  
Department of Nursing  
[nfalvo1@clarion.edu](mailto:nfalvo1@clarion.edu)  
412-578-5239

# Master of Science in Nursing Programs

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CLARION UNIVERSITY OF PENNSYLVANIA

Graduate Office  
Phone: 814-393-2337  
Fax: 814-393-2722

EDINBORO UNIVERSITY OF PENNSYLVANIA

Graduate Office  
Phone: 814-732-2856  
Fax: 814-732-2611

October 19, 2015

Dear IRB Committee Members:

I have granted permission for Thomas Culley and Jennifer Jarrell to use the MSN-L listserv to disseminate invitations to graduate nursing students currently enrolled in the joint Clarion and Edinboro Universities' Master of Science in Nursing Program to participate in their survey study, "Examining the Relationship Between Recent Life Experiences and Perceived Stressors in Nursing Students."

Sincerely,



Debbie Ciesielka, DEd, ANP-BC  
Associate Professor of Nursing, Clarion University  
Program Coordinator, Clarion and Edinboro Universities' MSN Program  
Clarion University-Pittsburgh Site  
4900 Friendship Avenue  
Pittsburgh, PA 15224  
Ph: 412-578-7277  
Email: dciesielka@clarion.edu

## Appendix C

### Letter of Invitation and Consent

Dear Fellow Student,

We are graduate students from the family nurse practitioner program at Clarion and Edinboro Universities of Pennsylvania and are seeking your participation in an online survey that seeks to identify the relationship between stress levels and recent life experiences in nursing students. Results of this study will help nurse educators to better understand stress and stressors among nursing students so they can develop ways to minimize their effects.

You have been invited to participate in this study as you are a currently enrolled online student in either the RN to BSN or MSN program at Clarion University. Completing the survey is voluntary and completely anonymous. If you do not wish to participate, then do not complete this survey. If you choose to participate, in addition to questions about stress and life events there are questions on age, gender, marital status, enrollment status as a student, and number of years you have worked as an RN. At any time, you may refuse to answer any question or to continue to participate in this study. Time to complete the survey should be no more than 15-20 minutes.

Participating in this survey is your way of giving consent for us to use your answers. There is no personal information that is linked to your responses. Survey responses will solely be used for scholarly purposes and will not be used for any other reason. Attached is a consent form for you to review that contains information about the researchers and this study. Thank you in advance for your assistance and cooperation in this important study.

Sincerely,

Thomas Culley  
Jennifer Jarrell

To take the survey: <http://www.surveymzmo.com/s3/2532272/Examining-the-Relationship-Between-Recent-Life-Experiences-and-Perceived-Stressors-in-Nursing-Students>

UNIVERSITY AFFILIATION: Clarion University of PA Administrative Office, 108 CarrierAdministration Building, Clarion, PA 16214, 814-393-2337

TITLE: EXAMINING THE RELATIONSHIP BETWEEN RECENT LIFE EXPERIENCES AND PERCEIVED STRESSORS IN NURSING STUDENTS

**PRINCIPAL INVESTIGATORS:**

Thomas Culley, RN  
Email: T.D.Culley@eagle.clarion.edu  
Phone: 412-302-4708

Jennifer Jarrell, RN  
Email: J.L.Jarrell@eagle.clarion.edu  
Phone: 412-417-2628

**FACULTY ADVISOR:**

Debbie Ciesielka, DEd, ANP-BC  
Clarion-Pittsburgh Site  
4900 Friendship Ave.  
Pittsburgh, PA 15224  
Email: dciesielka@clarion.edu  
412-578-7277

DESCRIPTION: I understand that I have been asked to participate in this research project which is a study of stress levels and stressful life experiences in nursing students. This study will seek approximately 60 subjects to participate. Anyone who is currently enrolled in the online RN to BSN or MSN program at Clarion University is able to participate. The survey will be completed online. The survey consists of two surveys of a 10-question survey of your level of stress, a 41-question survey of the intensity of your recent life experiences over the past month, and questions to describe you, such as which type of program you're enrolled in, whether or not you are enrolled full- or part-time, your age, gender, marital status, and the number of years of working as an RN. The surveys can be completed online using a link provided within this email. The surveys will take approximately 15-20 minutes to complete.

RISK AND BENEFITS: There are no foreseeable risks for participation in this study

COST AND PAYMENTS: There is no cost to me as a participant in the study and there is no payment for my participation. A benefit of the study is in increasing awareness of stress and stressors among nursing students so nurse educators can develop ways to minimize their effects.

CONFIDENTIALITY: I understand that any information about me obtained from this research will be kept strictly confidential. Information will be entered into a secure

server until removed by the researchers. Data will then be kept in locked files and only the principal investigator and research team will have access to it. It has been explained to me that my identity will not be revealed in any description or publication of this research. Therefore, I consent to publication for scientific purposes.

RIGHT TO REFUSE OR END PARTICIPATION: I understand that my participation is voluntary and that I may refuse to answer specific questions or to participate in this study or withdraw at any time. I also understand that I may be withdrawn from the study any time by the investigator(s). If I do not wish to participate, I do not complete the survey. In either case, I understand that there will be no effect on my role as a student in this program.

**My completion of the survey online shall confirm my review and understanding of the above and my consent to participate in this study**

Signature of Investigators: Thomas Culley; Jennifer Jarell

IRB Research Approval # 16-15-16



## Appendix D

### Perceived Stress Scale- 10 Item

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, please indicate with a check how often you felt or thought a certain way.

1. In the last month, how often have you been upset because of something that happened unexpectedly?

0=never  1=almost never  2=sometimes  3=fairly often  4=very often

2. In the last month, how often have you felt that you were unable to control the important things in your life?

0=never  1=almost never  2=sometimes  3=fairly often  4=very often

3. In the last month, how often have you felt nervous and "stressed"?

0=never  1=almost never  2=sometimes  3=fairly often  4=very often

4. In the last month, how often have you felt confident about your ability to handle your personal problems?

0=never  1=almost never  2=sometimes  3=fairly often  4=very often

5. In the last month, how often have you felt that things were going your way?

0=never  1=almost never  2=sometimes  3=fairly often  4=very often

6. In the last month, how often have you found that you could not cope with all the things that you had to do?

0=never  1=almost never  2=sometimes  3=fairly often  4=very often

7. In the last month, how often have you been able to control irritations in your life?

0=never  1=almost never  2=sometimes  3=fairly often  4=very often

8. In the last month, how often have you felt that you were on top of things?

0=never  1=almost never  2=sometimes  3=fairly often  4=very often

9. In the last month, how often have you been angered because of things that were outside of your control?

0=never  1=almost never  2=sometimes  3=fairly often  4=very often

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

0=never  1=almost never  2=sometimes  3=fairly often  4=very often

## Appendix E

### Survey of Recent Life Experiences

#### Instructions:

Following is a list of experiences which many people have some time or other. Please indicate for each experience how much it has been a part of your life over the past month. Put a "1" in the box provided next to an experience if it was not at all part of your life over the past month; "2" for an experience that was only slightly part of your life over that time; "3" for an experience that was distinctly part of your life; and "4" for an experience that was very much part of your life over the past month.

#### Intensity of Experience over the Past Month

1 = not at all part of my life

2 = only slightly part of my life 3 = distinctly part of my life

4 = very much part of my life

1. Disliking your daily activities
2. Disliking your work
3. Ethnic or racial conflict
4. Conflicts with in-laws or boyfriend's/girlfriend's family
5. Being let down or disappointed by friends
6. Conflicts with supervisor(s) at work
7. Social rejection
8. Too many things to do at once
9. Being taken for granted
10. Financial conflicts with family members
11. Having your trust betrayed by a friend
12. Having your contributions overlooked
13. Struggling to meet your own standards of performance and accomplishment
14. Being taken advantage of
15. Not enough leisure time
16. Cash flow difficulties
17. A lot of responsibilities
18. Dissatisfaction with work
19. Decisions about intimate relationship(s)
20. Not enough time to meet your obligations
21. Financial burdens
22. Lower evaluation of your work than you think you deserve
23. Experiencing high levels of noise
24. Lower evaluation of your work than you hoped for
25. Conflicts with family member(s)

26. Finding your work too demanding
27. Conflicts with friend(s)
28. Trying to secure loans
29. Getting “ripped off” or cheated in the purchase of goods
30. Unwanted interruptions of your work
31. Social isolation
32. Being ignored
33. Dissatisfaction with your physical appearance
34. Unsatisfactory housing conditions
35. Finding work uninteresting
36. Failing to get money you expected
37. Gossip about someone you care about
38. Dissatisfaction with your physical fitness
39. Gossip about yourself
40. Difficulty dealing with modern technology (e.g. computers)
41. Hard work to look after and maintain home

## Appendix F

### Demographics Collection Tool

1. Which nursing program are you currently enrolled in?
  - a. RN to BSN
  - b. RN to MSN
2. Which of the following best describes your enrollment status?
  - a. Full-time
  - b. Part-time
3. What is your age?
  - a. Under 25
  - b. 25-33
  - c. 34-44
  - d. 45-54
  - e. 54-65
  - f. Over 65
4. What is your gender?
  - a. Male
  - b. Female
5. What is your marital status?
  - a. Single
  - b. Married
  - c. Divorced
6. How many years have you been employed as an RN?
  - a. <1 year
  - b. 2-3 years
  - c. 4-5 years
  - d. 6-10 years
  - e. >10 years