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Hardiness, Adult Attachment Style, and Burnout in Nurses

Kristy A. Negri
Walden University

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Walden University

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Kristy A. Negri

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Walden University
2018

Abstract

Hardiness, Adult Attachment Style, and Burnout in Nurses

by

Kristy A. Negri

MS, Walden University, 2009

BS, Montana State University, 2003

Proposal Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Health Psychology

Walden University

June 2018

Abstract

The current nursing shortage is a pressing crisis that is expected to worsen over time. A key reason nurses leave nursing is burnout. The purpose of this study was to investigate personality hardiness and adult attachment style in relation to the development of burnout in licensed professional nurses. Hardiness theory and attachment theory indicated that each provided protection against burnout, but no research has been conducted to examine both factors in relation to burnout in nurses. Research Question 1 asked if there was a relationship between attachment style and total hardiness score; Research Question 2 asked if there was a relationship between attachment style and each of the hardiness facet scores (commitment, control, and challenge), and Research Question 3 asked if hardiness and attachment style had a combined impact on burnout scores. An online invitation was published on Facebook and linked to the study; 128 nurses agreed to participate in this survey. Participants provided demographic information, they completed the Dispositional Resilience Scale-Revised (DRS-15) to measure total hardiness and hardiness facet scores, the Experiences in Close Relationships-Revised (ECR-R) to measure attachment-related anxiety and avoidance, and the Burnout Measure, Short Version (BMS) to measure burnout. The data was analyzed using analysis of variance (ANOVA), a Kruskal-Wallis *H* test, and a post-hoc multiple regression. Findings confirmed that secure attachment was associated with higher total hardiness, commitment was significant to attachment, and hardiness and attachment scores each contributed to burnout, but an interaction was not found. This study has implications for positive social change: more effective burnout prevention programs for nurses are needed to help limit the nursing shortage.

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Dedication

This work is dedicated to all the luminaries who light the way.

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Chapter 1: Introduction to the Study

Introduction

Nurses represent the largest group of health professionals and are considered the very heart of healthcare (International Council of Nurses, 2014). In addition, they are typically engaged in the first phase of patient care (Chen, Lin, Wang, & Hou, 2009). They perform a range of patient care tasks in a variety of settings such as hospitals, medical offices, nursing homes, community health centers, prisons, and more (American Nurses Association [ANA], 2016). However, there is currently a shortage of nurses across the globe (Buchan & Aiken, 2008; World Health Organization [WHO], 2010) and that shortage is expected to grow significantly in the future (American Association of Colleges of Nursing [AACN], 2015). Without a sufficient number of nurses, both registered nurses and licensed practical nurses (referred to as licensed professional nurses for the purposes of this study), the healthcare system will not function effectively (Buchan & Aiken, 2008).

The impact of the nursing shortage is wide-reaching and substantial—from staff support for all those who are currently working in the healthcare system to all people who are in need of healthcare. As such, the recruitment and retention of qualified nurses is now recognized as a healthcare system priority (Price, 2008). Moreover, failure to remedy the nursing shortage will lead to a decrease in the quality and availability of healthcare for anyone that is in need of it (Buchan & Aiken, 2008).

Unfortunately, the nursing shortage is a complex problem. First, because nursing is considered to be of the most stressful type of work (Garrosa, Moreno-Jimenez, Liang,

& Gonzalez, 2008; Smith, Brice, Collins, Matthews, & McNamara, 2000) and is highly susceptible to burnout (Garrosa, Rainho, Moreno-Jimenez, & Monteiro, 2010), attracting and retaining qualified nurses is a continual challenge. Burnout is defined as a state of emotional, mental, and physical exhaustion (Pines & Aronson, 1988), typically resulting from prolonged exposure to stress. It is considered one of the main contributors to nursing shortages (Edward & Hercelinskyj, 2006). Second, nursing staff shortages often result in heavier workloads for existing staff. Increasing the workload of an already taxed nursing staff is bound to further exacerbate an already challenging situation, possibly causing more nurses to leave the field of nursing. Furthermore, of those nurses who do leave the field, one study found that more than half of ex-nurses said they would never practice nursing again and many said they would not recommend nursing to young people as a career choice (Skillman, Palazzo, Hart, & Keepnews, 2010). Other research has focused on the nursing shortage from the perspective of understanding the attrition rates of nursing students and recent graduates and the lack of empirical research on the subject (Gaynor, Gallasch, Yorkston, Stewart, & Turner, 2006). This perspective is outside the scope of the present investigation and is mentioned only to illustrate the enormity of the nursing shortage problem.

Research has been conducted on the nursing shortage problem from a variety of perspectives, often acknowledging that there is no “magic bullet” answer to resolve the crisis (Buchan & Aiken, 2008, p. 3265). Much of the research on stress in nursing has focused on identifying the many and various stressors in the field, developing effective coping techniques, and developing stress-management intervention programs. Yet the

nursing shortage remains a persistent and pressing problem. To design burnout prevention programs, recent research has called for a greater focus on the individual nurse, looking specifically at personality and sociodemographic factors (Queiros, Carlotto, Kaiseler, Dias, & Pereira, 2013).

Hardiness has long been recognized as a beneficial, protective component of the personality (Kobasa, 1979) and has also been found to be a protective factor against burnout (Queiros et al., 2013). Hardiness training programs have been developed to teach effective coping skills (Maddi, Kahn, & Maddi, 1998) and are used in high-stress work environments, such as nursing (Judkins & Ingram, 2002). Adult attachment style has been gaining attention in recent years as another possible beneficial component of the individual personality when it comes to stress and burnout. Malach-Pines (2004) found a relationship between adult attachment style and burnout in a variety of samples, including dialysis nurses, students, and two national samples of people in Israel (a sample of Jewish people and a sample of Arabic people). Findings revealed that a person's attachment style influences his or her perception of stress, and therefore, his or her method of coping. Future work, the author suggested, should further examine the relationship between adult attachment style and burnout by examining the "antecedents, correlates, and consequences of burnout" in people with different attachment styles in various occupations (Malach-Pines, 2004, p. 78). Because of the urgency of the nursing shortage crisis, this study followed Malach-Pines' suggestion by examining the combined role of hardiness and attachment style to the presence of burnout in licensed professional nurses.

I could find no studies that examined the relationship between the independent variables of personality hardiness and adult attachment style with regard to the presence of the dependent variable, burnout, in licensed professional nurses. This study is important because it fills this gap in the literature and adds to the body of knowledge on nurse stress and burnout, which may also aid in developing interventions for use in the nursing shortage crisis. In addition, the present study adds to social change initiatives by further informing the scientific community on these issues, which may impact the healthcare field as a whole as well as the individuals who work in it.

Chapter 1 covers the following topics: background, purpose, nature of this study, research questions and hypotheses, the theoretical framework, the assumptions, delimitations, and limitations for the study, and finally, the significance of this study.

Background

The current nursing shortage is considered a pressing issue (Buchan & Aiken, 2008) and an issue of high priority (Price, 2008). Efforts aimed at the recruitment and retention of qualified nurses is paramount for the success of the healthcare field as a whole (Lu, Barriball, Zhang, & While, 2012). There is a persistent need to clearly identify effective methods for coping with the daily demands and stressors that are present in a career in nursing, especially those that eventually lead to the development of burnout.

McVicar (2003) reviewed nursing workplace stress in a literature review. Findings indicated that the perceived sources—and impact—of stress vary widely among individual nurses. Indeed, perceptions of stress are not consistent among nurses, with

variations likely influenced by personal factors, coping ability, or hardiness. This research called for support for nurses as individuals to better understand personal factors and workplace stress, which is considered an under-researched topic (McVicar, 2003).

Queiros et al. (2013) identified hardiness among possible predictors of burnout among hospital nurses and suggested that, for understanding burnout and the development of burnout prevention programs, effective strategies must be based on investigations into the relationships between nurse personality and other factors, such as job satisfaction and emotional exhaustion. In other words, an interactionist approach to the study of burnout was suggested.

Adult attachment style research has shown that people with different attachment styles tend to view and cope with stressful situations differently (Malach-Pines, 2004). Zakin, Solomon, and Neria (2003) examined hardiness and adult attachment style in combat veterans and prisoners of war with regard to symptoms of posttraumatic stress disorder (PTSD). These authors found that hardiness and attachment style work in a compensatory manner. Escolas, Escolas, and Bartone (2014) investigated adult attachment style and hardiness among active duty military personnel to see if the two constructs had an impact on mood. The researchers found that a secure attachment style was positively associated with higher levels of overall hardiness, as well as higher levels of each of the three facets of hardiness (commitment, control, and challenge). Furthermore, positive mood states were found to be positively related to both hardiness and a secure attachment style. These findings suggest that intervention strategies to

improve mood and well-being for military personnel include attachment-focused therapy (Escolas et al., 2014).

Indeed, adult attachment may be a helpful lens from which to examine and better understand stress perception and burnout. Kaya (2010) suggested attachment as a way for nurse educators to understand their students and help them complete their nursing programs by promoting feelings of belonging, especially for those who are insecurely attached. Malach-Pines and Yafe-Yanai (2001) suggested that adult attachment may be a (or “the”) reason that people choose particular career fields in the first place. Malach-Pines and Yafe-Yanai (2001) pointed out that childhood experiences and family history have a major influence on career choice (p. 171). Personal career choice involves high hopes and expectations for a “sense of meaning for their entire life” (Malach-Pines, 2000, p. 634). Burnout may be the result, in part, from a failure to find a sense of meaning in one’s work (Malach-Pines, 2000).

Attachment theory may also be helpful as a lens through which to examine burnout prevention in the nursing field (Adshead, 2010). Reviewing the existing literature on attachment style in the workplace, Harms (2010) noted that most measures for attachment have been developed for research purposes and claimed an “incredible need” (p. 293) for additional research on adult attachment style in the workplace. Harms suggested that attachment research may also be beneficial for training and hiring selection purposes (p. 291). The present study investigated the relationship between adult attachment style and hardiness in the presence of burnout in licensed professional nurses.

Problem Statement

Although there has been an abundance of research on stress-related issues in nursing, including personality hardiness and burnout, the problem of the nursing shortage remains a continual threat to the healthcare field. Research conducted on nurse stress and the development of burnout has focused on types of stress, individual coping skills, and various personality traits (including hardiness) in the resistance to stress or the development of burnout (Burgess, Irvine, & Wallymahmed, 2010; Gustafsson, Persson, Eriksson, Norberg, & Strandberg, 2009). Hardier nurses are less stressed (Van Servellen, Topf, & Leake, 1994) and have a greater ability to adapt in stressful situations (Hurst & Koplín-Baucum, 2005) than those who are less hardy. Hardiness training and other kinds of stress management and/or burnout prevention programs have been developed with varying degrees of effectiveness (Awa, Plaumann, & Walter, 2010; Judkins, Reid, & Furlow, 2006). As research has discovered, stress is not the only factor to consider, nor is the environment the only source of stress. Indeed, adult attachment style may become problematic, especially in stressful situations, particularly if the individual is insecurely attached (Adshead, 2010).

Because people use the working model of attachment developed in infancy as a framework for later behaviors (Bowlby, 1973) even into adulthood (Mikulincer & Shaver, 2007)—which affect such things as career choice or specialization (Ciechanowski, Russo, Katon, & Walker, 2004)—attachment style has been increasingly recognized as an important component to consider when looking at relationships with others, especially for professional caregivers (Khodabakhsh, 2012). Working models of

attachment guide behavior, but also impact the way in which a person perceives an interaction (Mikulincer & Shaver, 2007, p. 23).

Malach-Pines (2004) found a correlation between adult attachment style and burnout in various samples of people. Adult attachment style was found to influence stress perception and the coping responses (Malach-Pines, 2004). To date, no research had been done on the combined role of adult attachment style and personality hardiness to burnout in licensed professional nurses.

Purpose of the Study

The purpose of this quantitative study was to examine the two independent variables, adult attachment style and personality hardiness, in relation to the presence of the dependent variable, burnout, in licensed professional nurses. Research on nurse stress and burnout has shown that certain individual protective factors may help insulate nurses against burnout. Indeed, personality hardiness is one such factor. Adult attachment style research has shown that people with a secure attachment style tend to cope effectively in stressful conditions and have less of a tendency toward burnout (Malach-Pines, 2004). Escolas et al. (2014) investigated the relationship between hardiness and adult attachment style to determine if the two variables impacted mood (which is considered an indicator of well-being) in active duty military personnel. Adult attachment style was found to be positively associated with overall hardiness in this military group. In addition, secure attachment and hardiness were found to be a beneficial defense against stress (Escolas et al., 2014). In a study of combat veterans and prisoners of war, hardiness and adult attachment style was also found to work in a compensatory manner (Zakin et al., 2003).

No studies have examined these variables, hardiness and adult attachment style, in relation to burnout in licensed professional nurses. This work fills that gap in the literature.

Research Questions and Hypotheses

The following research questions and hypotheses were examined during this study:

1. Is there a relationship between adult attachment style (secure, fearful, preoccupied, and dismissive) and hardiness among licensed professional nurses?
H1_o: There is no relationship between adult attachment style (secure, fearful, preoccupied, and dismissive) and hardiness among licensed professional nurses.
H1_a: There is a relationship between adult attachment style (secure, fearful, preoccupied, and dismissive) and hardiness in licensed professional nurses.
2. Is there a relationship between adult attachment style (secure, fearful, preoccupied, and dismissive) and the components of hardiness (commitment, control, and challenge) in licensed professional nurses?
H2_o: There is no relationship between adult attachment style (secure, fearful, preoccupied, and dismissive) and the components of hardiness (commitment, control, and challenge) in licensed professional nurses.

H2_a: There is a relationship between adult attachment style (secure, fearful, preoccupied and dismissive) and the components of hardiness (commitment, control, and challenge) in licensed professional nurses.

3. Is there an interaction between adult attachment style and hardiness on the presence of burnout symptoms (physical, emotional, and mental exhaustion) in licensed professional nurses?

H3_o: There is no interaction between adult attachment style and hardiness on the presence of burnout symptoms (physical, emotional, and mental exhaustion) in licensed professional nurses.

H3_a: There is an interaction between adult attachment style and hardiness on the presence of burnout symptoms (physical, emotional, and mental exhaustion) in licensed professional nurses.

Adult attachment style was assessed by the Experience in Close Relationships—Revised survey (ECR-R; Fraley, Waller, & Brennan, 2000). Hardiness was assessed using the Dispositional Resilience Scale (DRS-15R; Bartone, 2008). Burnout symptoms were assessed using the Burnout Measure—Short Version (BMS; Malach-Pines, 2005). All instruments have been found to be reliable and valid (Bartone, 2007; Fraley et al., 2000; Malach-Pines, 2005;). Data for this study were obtained using self-report information gathered from the study participants using these survey instruments.

Theoretical and Conceptual Framework for the Study

The theoretical and conceptual frameworks that guided this study were the concept of burnout, the theory of hardiness, and the theory of attachment.

Burnout

Burnout is considered a main contributor to the nursing shortage (Edward & Hercelinskyj, 2006; Leiter & Maslach, 2009) and is often cited as a reason nurses leave the healthcare field (Garrosa et al., 2010). It is defined as a state of exhaustion—emotional, mental, and physical—resulting from long-term exposure to emotionally demanding situations (Pines & Aronson, 1988, p. 9). It is thought to be experienced as a “gradual erosion” of the spirit resulting from the effects of daily chronic stressors at work (Pines & Aronson, 1988, p. 11).

Hardiness

The theory of hardiness was developed by Kobasa (1979) to describe the ability of some individuals to better cope with life stress, which is considered a precursor to burnout (Pines & Aronson, 1988). Hardiness consists of the following three components: commitment (feeling committed to life events and activities), control (feeling some ability to control or influence life events), and challenge (perceiving that life is expected to be full of changes and challenges that will provide rewarding opportunities for growth; Kobasa, 1979). Kobasa hypothesized—and found—that a person possessing a greater degree of these three personality components would experience less stress, and therefore remain healthier than those with lesser degrees (Kobasa, 1979). While originally thought to be a relatively fixed component of personality, hardiness can be taught and learned (Maddi et al., 1998). Sometimes it is considered a style of functioning rather than a fixed personality trait (Bartone, 2008).

In the field of nursing, nurses who have a high degree of hardiness experience less stress (Van Servellen et al., 1994) and have lower burnout scores than nurses low in hardiness (Garrosa et al., 2008). Therefore, hardiness training would be beneficial as a stress-management intervention (Hurst & Koplín-Baucum, 2005) and would likely help prevent burnout as well (Queiros et al., 2013).

Attachment

Attachment theory posits that early life experiences have a profound and lasting impact on a person's behavior over their lifetime (Bowlby, 1973, 1980, 1982). Attachment behaviors are a system of behaviors that are thought to have evolved as a process of natural selection because they led to a survival advantage by keeping an infant in close proximity to caregivers (Ainsworth, 1989) who are assumed to provide safety and protection. The care that an infant receives in early life influences the neural pathways that are being formed at the time (Bowlby, 1982). Attachment is an emotional or affectional bond that is part of caregiving (Ainsworth, 1989). If an infant is confident that an attachment figure is available and will be responsive and helpful during a threat or a crisis, the result is secure attachment. However, if an infant is uncertain about the availability or responsiveness of his or her attachment figure, or believes that the attachment figure will not be available (or will be uncaring or refuse to help during a crisis), the result is insecure attachment (Bowlby, 1988). Insecure attachment (anxious attachment or avoidant attachment) is known to be associated with poor coping and career burnout (Malach-Pines, 2004).

Attachment models, then, are developed through an interaction between the self and others in the environment. Two questions underlie these interactions: (a) Am I worthy and lovable, and, (b) are others trustworthy and caring (Klohnen & John, 1998)? Bartholomew and Horowitz (1991) developed four different attachment styles based on the following models of self. A positive model of the self (I am lovable) and a positive model of others (others are trustworthy and caring) will result in the development of a secure attachment style. The other three models result in the development of an insecure attachment style. A negative model of the self (I am not lovable) and a negative model of others (others are not trustworthy and caring) results in a fearful pattern. A negative model of the self and a positive model of others will result in a preoccupied attachment pattern. A positive model of self and negative model of others results in a dismissing attachment pattern (Bartholomew & Horowitz, 1991).

These early attachment experiences shape the frameworks that serve as a basis for individual behavior in relationships throughout the lifespan (Ainsworth, 1989). Indeed, internal working models of attachment help each person in a relationship to interpret behavior from, and guide reactions to, partners (Cassidy & Shaver, 2008). Research on adult attachment styles has found that attachment style does influence interactions with others in work environments (Simmons, Nelson, & Quick, 2003), in close and romantic relationships (Simpson & Rholes, 1998), in fact, in virtually all areas of life (Cassidy & Shaver, 2008), even including emotional response to psychological pain (Cassidy, Shaver, Mikulincer, & Lavy, 2009). Attachment investigations have expanded to include attachment-related psychodynamics that examined adult attachment styles, and the

largely subconscious effects of attachment on individual perceptions and reactions in or to various situations (Shaver & Mikulincer, 2002).

As mentioned earlier, Malach-Pines (2004) found that secure attachment negatively correlated with burnout in a wide range of participants. Early experiences in childhood might influence career choice in adulthood, influence goals and expectations in that career, and may even be involved in the development of burnout. Malach-Pines suggested additional research into the antecedents, correlates, and consequences of burnout in people with different attachment styles who occupy different positions and work in various occupations. This suggestion is currently relevant for the nursing field. Hence, this study investigated the relationship between adult attachment style and hardiness level and the presence of burnout in licensed professional nurses. Attachment style, personality hardiness, and burnout will be discussed in more detail in Chapter 2.

Nature of the Study

The present study is quantitative in nature. Quantitative research is consistent with understanding the concept of burnout as it relates to hardiness and adult attachment style using the instruments and statistical analyses described in this work. Data were obtained via self-report in survey instruments. This study investigated the influence of the independent variables of adult attachment style and personality hardiness on the presence of the dependent variable, burnout, in a sample of licensed professional nurses. All participants were also asked to complete a demographic questionnaire to gather general information (e.g., age and gender).

SPSS software was used to analyze the collected data. An ANOVA was used to determine whether the specific attachment groups (secure, fearful, preoccupied, and dismissive) differed in total hardiness scores. A Kruskal-Wallis H Test was used to determine if there were differences in the hardiness facet scores (commitment, control, and challenge) between the four attachment groups. An ANOVA was also used to determine whether there was an interaction effect between adult attachment style and hardiness on the presence of burnout in the sample of licensed professional nurses. A multiple regression analysis was conducted to further analyze the relationships between the variables.

Definitions

Burnout: Burnout is defined as a syndrome comprised of emotional exhaustion, mental exhaustion, and physical exhaustion (Pines & Aronson, 1988). A score of four (4) or higher on the BMS is indicative of burnout (Malach-Pines, 2005).

Attachment Style: A developed pattern of expectations, needs, emotions, emotion-related strategies, and social behavior that results from the activation of the attachment behavioral system (Bowlby, 1982; Shaver & Mikulincer, 2002). The ECR-R measures attachment along two dimensions, scoring for attachment anxiety and attachment avoidance. However, exact attachment style can be determined by plotting the two scores into the four categories of secure, fearful, preoccupied, and dismissive (Fraley et al., 2000).

Hardiness: A collection of dispositional factors (commitment, control, and challenge) that aid in managing perceptions so that stressors are considered manageable

and less threatening (Khoshaba & Maddi, 1999). Hardiness is a “pattern of attitudes and skills” that enables a person to be resilient and continue to thrive despite stressful circumstances (Maddi & Khoshaba, 2005, p. 13) and to view change as a normal and challenging part of life (Bartone, 2008). A score of 34 or higher on the DRS-15R is indicative of a high level of hardiness. Scoring 27 or lower indicates low levels of hardiness. A score of between 28 and 33 is considered average hardiness (Bartone, 2008).

Stress: Stress is considered a complex concept (and an ambiguous term) because it is used to refer to both the physiological response to an event and also the stimulus (event) that produces the physiological response (Monat, Lazarus, & Reevy, 2007). Furthermore, stress is difficult to define because each person’s perception and interpretation of an event will be different (Monat, Lazarus, & Reevy, 2007). Stress is commonly defined as “circumstances that most people would find stressful” (Sergerstrom & Miller, 2004, p. 601).

Assumptions

The instruments used to measure hardiness, burnout, and adult attachment style have been previously found to be psychometrically viable for measuring those variables. I assumed that these measures accurately assessed their intended constructs and would therefore result in accurate findings. The participants were all over the age of 18 and I assumed they could read and comprehend the surveys and would answer the research questions honestly and to the best of their ability. No studies had been conducted on licensed professional nurses that looked at hardiness and attachment style on the presence of burnout. Thus, this study focused on licensed professional nurses and assumed that

personality hardiness and adult attachment style would have an impact on burnout in nurses. It was also assumed that the two independent variables, together, would have a combined impact on the presence of burnout in licensed professional nurses.

Scope and Delimitations

The purpose of this study was to contribute to the existing body of research on adult attachment theory, hardiness theory, and the concept of burnout among licensed professional nurses. More precisely, the aim of this research was to examine the influence of adult attachment style and hardiness level on the presence of burnout in licensed professional nurses in the highly stressful field of nursing. Research in nursing has found that hardiness helps nurses to manage daily stress and therefore to generally reduce burnout. Secure attachment has been found to help individuals to cope with stress more effectively overall. However, no studies had been conducted on the combined impact of hardiness and adult attachment style to the presence of burnout among licensed professional nurses.

Results from this study may not apply to others working in the nursing field, such as unlicensed nursing employees (e.g., certified nurse's aides). Generalizing the results to other groups of people, or career fields, would not be appropriate. Finally, there are other variables that contribute to the understanding of nurse stress and burnout that were not addressed in this study. The concept of resilience, for example, has been studied extensively in nursing, but was not included in this study. Resilience is considered rebounding from stress (Kersting, 2005) while hardiness is resistance, or thriving, in spite

of stress (Khoshaba & Maddi, 1999). This study focuses on hardiness, specifically, and resisting the effects of stress.

Limitations

There were several limitations to address regarding this study. First, the study targeted a sample of licensed professional nurses using SurveyMonkey. The nurses who chose to participate in the study may not accurately represent nurses in general (non-response bias resulting in a biased sample). Additional research would be needed before the results could be generalized to all licensed professional nurses. Next, the instruments chosen for this research were assumed to measure the constructs chosen for the study. To address construct validity, future studies may want to replicate this research using different instruments to measure for hardiness, burnout, and adult attachment style. The reliability and validity of the instruments used in this study are discussed in detail in Chapter 3.

Significance

Most of the existing research on stress leading to burnout and on hardiness in the nursing field has not taken into account the potentially significant impact of adult attachment style on individuals' perceptions of environmental and personal stressors in the field. Attachment patterns formed in infancy are thought to be influential in later adult relationships, including work relationships in organizations (Richards & Schat, 2011). A more thorough understanding of attachment patterns in adulthood has the potential to inform stress management and the prevention of burnout, which is of particular importance during the current nursing shortage crisis.

The study's social change implications include the potential to refine and/or revise the existing methods of, and training in, stress management to decrease burnout among licensed professional nurses and others working in the healthcare field. If burnout can be prevented in nurses, each nurse would benefit from the effort, both personally and professionally. In the healthcare field, stress would be better managed and fewer members of nursing staff would be lost to the effects of burnout.

Summary

The current nursing shortage is a pressing problem. One of the key reasons nurses leave the field of nursing is due to burnout. The purpose of this study was to investigate the personality trait of hardiness and individual adult attachment style to the presence of burnout in nursing. There has been an abundant amount of research done on stress and hardiness, as well as on the concept of burnout, in nursing. Most of the research involving stress, hardiness, and burnout has demonstrated that hardiness serves as a protective factor against stress and burnout. Research on adult attachment style has shown that attachment style has an influence on most areas of life, including work interactions and relationships. No studies have examined the role of personality hardiness and adult attachment style to the presence of burnout, specifically in nursing. This study addressed that gap in the literature.

In Chapter 2, I provide a review of the existing literature on personality hardiness, adult attachment style, and burnout in nursing and other areas. I identified the gap in the literature regarding these constructs and also outlined the need for additional research in this area. In Chapter 3, I discuss the research design, variables, population, instruments,

and the hypotheses for this study. In Chapter 4, I discuss procedures for data collection and analysis as well as the results. In Chapter 5, I discuss the study findings and interpretation of the findings, the limitations, the implications for social change, and the recommendations for future research.

Chapter 2: Literature Review

Introduction

Although there has been an abundance of research on stress-related issues in nursing, including research on hardiness and burnout, the problem of the nursing shortage remains a continuing threat to the healthcare field. Research on nurse stress and the development of burnout has focused on types of stress, individual coping skills, and various personality traits (including hardiness) in the resistance to stress or the development of burnout (Burgess, Irvine, & Wallymahmed, 2010; Gustafsson, Persson, Eriksson, Norberg, & Strandberg, 2009). Hardier nurses are less stressed (Van Servellen, Topf, & Leake, 1994) and have a greater ability to adapt to stressful situations than those who are less hardy (Hurst & Koplín-Baucum, 2005). Hardiness training and other kinds of stress management and/or burnout prevention programs have been developed with varying degrees of effectiveness (Awa, Plaumann, & Walter, 2010; Judkins, Reid, & Furlow, 2006). As research has discovered, stress is not the only factor to consider when it comes to burnout, nor is the environment the only source of stress. Indeed, adult attachment style may become a factor, especially in stressful situations, particularly if the individual is insecurely attached (Adshead, 2010).

Attachment style has been increasingly recognized as an important component to consider when looking at relationships with others, especially for professional caregivers (Khodabakhsh, 2012). Attachment—described in terms of working models—guides behavior, but it also impacts how a person perceives an interaction (Mikulincer & Shaver, 2007, p. 23). Malach-Pines (2004) found a correlation between adult attachment style and

burnout in various samples of people. Adult attachment style was found to influence stress perception and the coping responses (Malach-Pines, 2004). To date, no research has been done to examine the combined role of adult attachment style and personality hardiness on burnout in licensed professional nurses. The purpose of this quantitative study was to examine the two independent variables, adult attachment style and personality hardiness, in relation to the presence of the dependent variable of burnout in licensed professional nurses.

Research on nurse stress and burnout has shown that there are individual protective factors that may help insulate nurses against developing burnout. Personality hardiness is one such factor. Research on adult attachment style has shown that people with a secure attachment style tend to cope effectively in stressful conditions and have less of a tendency toward burnout (Malach-Pines, 2004). Escolas et al. (2014) investigated the relationship between adult attachment style and hardiness to determine if the two variables impacted mood (an indicator of well-being) in active duty military personnel. Adult attachment style was found to be positively associated with overall hardiness in this military group. In addition, secure attachment and hardiness were found to be a beneficial defense against stress (Escolas et al., 2014). In a study of combat veterans and prisoners of war, hardiness and adult attachment style were also found to work in a compensatory manner (Zakin et al., 2003). But no studies have been conducted on these variables of hardiness and adult attachment style in relation to the presence of burnout in licensed professional nurses. This work filled this gap in the literature.

Nurses make up the single largest health profession in the United States—a profession with a job outlook expected to grow much faster than average for 2014–2024 (Bureau of Labor Statistics, 2015). Nurses perform a variety of patient care duties, depending upon their education level, role, and practical experience (American Nurses Association, 2016). Registered nurses (RNs), for example, typically work as part of a larger healthcare team to provide essential services to patients. RNs coordinate patient care, administer medication and other treatments to patients, take and record medical histories, take and record vital signs, help with patient and family education, and many other tasks depending upon where they work (Bureau of Labor Statistics, 2015). Nurses, in general, are essential to the delivery of effective health care services across a wide array of settings to include hospitals, home health agencies, nursing homes, medical care offices, and prisons (ANA, 2016). Furthermore, nurses as educators are needed to teach and train the next generation of nurses. In summary, the healthcare field needs experienced nurses to function effectively (Buchan & Aiken, 2008).

The importance of nurses in the healthcare system highlights concerns for the current nursing shortage. This shortage is a persistent problem (Gaynor et al., 2006; Goodin, 2003; Judkins, 2007) that is expected to get worse (AACN, 2015) and possibly even “catastrophic” (McMenamin, 2014, para. 1) over time.

The nursing shortage cannot be blamed on one cause nor will we find a single solution. There are many possible contributing factors to the nursing shortage, including: low nursing education enrollment numbers that will not meet the demand for new nurses, (AACN, 2015) the aging of the nursing workforce (as well as the impact nurse retirement

has on the number of nurse educators), low enrollment in nursing programs, poor image of nursing as a career (Goodin, 2003), as well as high attrition for nursing program students, high attrition rate for new nurses (Gaynor et al., 2006), insufficient staffing, and the high stress that is an inherent characteristic of the nursing field (McVicar, 2003; Skillman et al., 2010) that often leads to burnout. Indeed, research on stress (which eventually contributes to the development of burnout) in nurses is of key research importance for the nursing field (Epp, 2012; Leiter & Maslach, 2009). Nurse burnout not only affects nurse health, but also their work attitude, quality of care to patients, and nurse staff turnover (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002; Stewart, 2014).

In an effort to address one of the many issues involved in the nursing shortage, the present study investigated the topic of nurse burnout from the level of the individual nurse. Calls have been made over the years for more focus on the *individual* when it comes to understanding and preventing occupational burnout (see Maslach & Goldberg, 1998). More recent research suggested that personal factors of the individual nurses be the focus of future research for better understanding of nurse stress and the prevention of burnout (Queiros et al., 2013). In an attempt to better understand burnout as it pertains to the nursing shortage, the present study investigated the relationship between the personal factors of personality hardiness and adult attachment style with regard to the presence of burnout in licensed professional nurses.

Chapter 2 provides an overview of the literature that is relevant to this study. This review of the literature starts with a review of the concept of burnout as it pertains to the field of nursing. The next section is a review of the theory of hardiness and a discussion

of the relevant research on hardiness as it pertains to stress and burnout in nursing. The third section reviews the theory of attachment followed by a discussion of adult attachment behavior. Finally, the last section discusses current research studies and articles that examine burnout, personality hardiness, and adult attachment style. A clear connection between personality hardiness and burnout, as well as adult attachment style and burnout, was illustrated by a review of the literature. In addition, the literature review showed an existing gap that this present research investigated: studies examining adult attachment style *and* hardiness as these two constructs relate to the presence of burnout in licensed professional nurses.

Literature Search Strategy

To identify prospective articles and books, the following databases—Academic Search Premier, PsycINFO, PsycARTICLES, Google, and Google Scholar—were searched with the following keywords in various combinations from 1979–2016: *hardiness, personality, nurse, burnout, stress, attachment, attachment style, and adult attachment style.*

Conceptual and Theoretical Foundations

The conceptual and theoretical frameworks that grounded this study were the concept of burnout, the theory of hardiness, and the theory of attachment.

The Concept of Burnout

Burnout was first recognized as a type of professional exhaustion and was initially discussed as social problem and an occupational concern for certain kinds of professions, in the 1970s (Maslach & Goldberg, 1998). The “most striking cases of burnout” have

been cited as being specifically found in nursing (Pines & Aronson, 1988, p. 3). Burnout as a concept has been generally described as a “gradual erosion” of the spirit typically resulting from everyday exposure to chronic stressors (Pines & Aronson, 1988, p. 11) and, as stated, is a main contributor to the present nursing shortage (Edward & Hercelinskyj, 2006). It is a “complex human experience that is affected by the variability of human nature” (Pines & Aronson, 1988, p. 19). Others have described burnout as a state of feeling depersonalized and having reduced feelings of personal accomplishment (Awa et al., 2010), or like a form of existential failure (Pines & Aronson, 1988).

Officially, burnout has been defined as being composed of three dimensions: emotional exhaustion, mental exhaustion, and physical exhaustion. *Emotional exhaustion* in burnout is defined as having feelings of helplessness and hopelessness, and feeling trapped (Pines & Aronson, 1988). Emotional exhaustion is associated with feelings of depression and feeling emotionally drained. With emotional exhaustion, there is a decreased enjoyment of work, irritability, and nervousness. *Mental exhaustion* in burnout is defined as having a negative attitude, dissatisfaction with work, lowered self-concept, and feelings of inadequacy, incompetence, and ineffectiveness. These feelings in mental exhaustion often lead to the development of cynical, dehumanizing attitudes toward recipients of services (in the case of nurses, the recipients are healthcare patients) (Pines & Aronson, 1988). *Physical exhaustion* in burnout is defined as having “low energy, chronic fatigue, and weakness” (Pines & Aronson, 1988, p. 12). Physically exhausted individuals are more susceptible to illness, headaches, tension, eating habits changing, and poor sleeping patterns. Due to these feelings of exhaustion, burned out professionals often find

themselves avoiding their clients altogether (Leiter & Maslach, 1988; Pines & Aronson, 1988). In summary, burnout is a “psychological syndrome that involves a prolonged response to chronic interpersonal stressors on the job” (Leiter & Maslach, 2009, p. 332; see also, Leiter & Maslach, 1988).

Nursing is a career field that has high exposure to stress from various sources, contributing to the eventual development of burnout (Garrosa et al., 2008). In addition, each area of nursing specialization might provide different main stressors that contribute to burnout. Critical care nurses may be exposed to and affected by different main stressors (Epp, 2012) than operating room nurses, for example. The source and type of stress, as well as the individual perception of the stress, varies widely in the nursing field (McVicar, 2003). Indeed, one stress management professional indicated that the increasing requirement to learn and work with advanced technology has seemed to frustrate nurses and therefore, has provided a relatively new source of burnout causing stress. This new stressor has forced a time shift that leaves the nurses feeling that they are short of time to dedicate to patient care at the level in which they would prefer—and expected—when choosing to become a nurse (B. L. Seaward, personal communication, 2013). Hospice nurses are frequently exposed to the following significant stressors: patient death and dying, caring for emotional needs of patients and families facing death and dying, high workload, and lack of resources and support (Hawkins, Howard, & Oyeboode, 2007). Research conducted in the field of psychiatric nursing listed work overload and low job control as stressors contributing to burnout (Imai, 2004). In operating room nurses, patient safety was found to be rated as highest on the stress scale

instrument used in the study (Chen et al., 2009). Burnout could be caused by a variety of factors, including hypersensitivity to social rejection (Ronen & Baldwin, 2010) and personality traits (Gustafsson et al., 2009). No matter the type of nurse or stressors tested in each research study, consistent high exposure to various sources of work stress often leads to illness, missed work, and symptoms of burnout.

Burnout has been extensively studied in the field of nursing, and yet, is still named as a main contributor to the nursing shortage (Edward & Hercelinskyj, 2006) and a main reason seasoned and new nurses leave the field (Gaynor et al., 2006; Skillman et al., 2010). Many types of burnout prevention and stress intervention programs have been developed and used with varying levels of success (i.e. Awa et al., 2010). Additional work that focuses on stress and the individual person is needed. Indeed, the transactional view of the stress and coping process posits that it is the individual *perceptions* of stressors that determines how, and how well, stress is coped with by the individual person at a given place and time (Lazarus, 1990). It is known that nurses that are high in personality hardiness tend to cope more successfully with stress (Hurst & Koplin-Baucum, 2005), making hardiness a protective factor against the development of burnout (Queiros et al., 2013).

The Theory of Personality Hardiness

Early research into the concept of personality hardiness started with an inquiry into the wide range of the effects of stress on individual people. The stress-illness connection was being widely researched at the time. However, Kobasa (1979) noticed that some of the participants within various studies on stress did not become ill in spite of

scoring high in stress level. These seemingly resistant research participants were being ignored because they did not align with the aim of the stress-illness research at that time. Kobasa (1979), however, specifically targeted these resilient individuals to investigate possible mediating factors that may serve as a buffer against stressful circumstances and therefore aid in illness prevention.

Kobasa (1979) suspected initially that the personality may be an important factor in determining illness predictions in relation to stress. Kobasa's research examined male executives for stress and illness using a questionnaire. Participant responses were grouped into high stress/low illness and high stress/high illness groups, or set aside. High stress/low illness participants showed more commitment, control, and challenge (now understood as components of hardiness) than did the high stress/high illness participants. Furthermore, the high stress/low illness participants perceived their lives as less stressful than did the high stress/high illness ones. Kobasa (1979) used the term "hardy" to describe the high stress/low illness (stress-resistant) personalities. The construct of hardiness was born as the result of investigative efforts to determine an explanation for the wide range of individual personality differences in stress tolerance (Kobasa, 1979; Kobasa, Maddi, & Kahn, 1982; Maddi & Kobasa, 1984).

Hardiness is comprised of a pattern of personal attitudes (Maddi et al., 2009) that serves to help turn stressful circumstances to one's advantage (Maddi, 2008). The hardy personality is composed of three main factors, as mentioned earlier: commitment, control, and challenge (Kobasa, 1979; Kobasa et al., 1982). *Commitment* is the tendency to want to be an involved participant in daily activities rather than avoid them. Committed people

are active participants in their lives. *Control* is living as though one has faith in one's ability to cope with potential stressors and stressful events (Kobasa, 1979; Kobasa et al., 1982) so that these events are not perceived as overwhelming (Kobasa et al., 1982).

Challenge is the belief that change is an expected occurrence in life, as a rule, and is seen as even a welcomed an opportunity for growth (Kobasa, 1979). The challenge component is interpreting the environment of life as exciting and interesting instead of stressful or threatening (Kobasa, 1979; Maddi, 2002). The “three Cs” of commitment, control, and challenge serve to provide “the courage and motivation to do the hard but important work of using stressful circumstances to your advantage” (Maddi & Khoshaba, 2005, p. 13). In conclusion to her initial work on hardiness, Kobasa urged social scientists to take steps to discover ways of molding and shaping the personality toward stress resistance and resilience (Kobasa, 1979).

Although hardiness has been defined as a collection of personality factors, Bartone (2008) believes hardiness to be more like “a generalized style of functioning that includes cognitive, emotional, and behavioral qualities” (para 4). In addition, hardiness can be taught and learned (Maddi et al., 1998). In a meta-analysis of thirty years of research on personality hardiness, Oliver (2009) found that hardiness has a significant positive relationship with well-being and health, a strong, positive correlation with job satisfaction, and a strong, negative correlation with burnout (Oliver, 2009). Personality hardiness has been a frequent and logical choice for researchers interested in investigating nurse stress and/or the concept of burnout (i.e. Van Servellen et al., 1994; Garrosa et al., 2008; Garrosa et al., 2010). Attachment style has also been recognized as a

factor that influences perception of stress (Malach-Pines, 2004; Kaya, 2010), coping, and emotional reactions to stress (Mikulincer & Florian, 1998).

Attachment Theory

Attachment theory was first developed by John Bowlby (1973, 1980, 1982).

Attachment is a system of behaviors that are believed to be the result of an evolutionary survival advantage and are developed during early life. Infants use behavioral signals, such as crying and clinging, to increase chances of survival by helping to keep them close to one or more potential individuals (caregivers) that might serve as protectors, if and when needed (Ainsworth, 1989; Bowlby, 1982). The early experiences with a caregiver shape the child's expectations about whether the caregiver (typically a parent) is available when needed (Kaya, 2010) or whether the infant is somewhat, or mostly, on his/her own (Bowlby, 1982).

Attachment style. A child's expectations about the availability of a caregiver form working models of attachment, or an attachment style. The developed attachment style will influence how infants organize their thinking, affects, behaviors, and guide reactions to stress (Kaya, 2010). In essence, infants observe the behavior of the caregiver(s) over time and eventually gain some insight to the feelings and motives of the caregiver(s), especially toward the infant (Bowlby, 1982). A securely attached individual is confident that his or her parental/attachment figure cares for him/her and will come to his/her aid should a frightening or threatening situation arise. In the child knowing that basically s/he is loved and valued, the child is less concerned about his own safety and able to actively explore the environment with less fear because the caregiver cares for and

will be also looking out for him/her (Bowlby, 1988). An anxiously attached individual is uncertain about his or her attachment figure in terms of availability or interest (care) in helping during a time of need. As such, an anxiously attached child spends more time worrying and feeling fearful and anxious about their safety when exploring the environment. An avoidantly attached individual is fairly certain that his or her attachment figures will not be available when needed for assurance or protection. In fact, the child expects to often be met with rebuffs from caregivers when seeking help. In response, the child works toward becoming emotionally self-sufficient (Bowlby, 1988) and thus, learns to rely on no one but his or her own self. Attachment behaviors developed during infancy and childhood are observable throughout the lifespan (Bowlby, 1982).

Adult attachment style. No matter a person's age, to remain "in easy access of a familiar individual" who is willing to come to our aid, when needed, is a good plan (Bowlby, 1988, p. 27). Early experiences with caregivers shape internal mental representations of attachment that are used throughout the entire lifetime (Bowlby, 1988; Griffin & Bartholomew, 1994). Attachment behavior is known to be a function of humans and other animals from "cradle to the grave" (Ainsworth, 1985, p. 29). Indeed, attachment styles developed in childhood are influential on the behaviors of adult individuals who are in relationships with one another (Simpson & Rholes, 1998) including work relationships (Harms, 2010; Simmons, Nelson, & Quick, 2003; Simmons, Gooty, Nelson, & Little, 2009). Could it be that attachment is the underlying issue in the need for and importance of mentors in the early careers of nurses (Price, 2008)? Adult attachment style has also been found to influence a great many things to include a

person's self-worth, response to stress (Cassidy & Shaver, 2008, p. 207), and the development of burnout (Malach-Pines, 2004; Simmons et al., 2009). Attachment might then be a helpful concept to consider when developing burnout prevention programs (Adshead, 2010). Modeled after a study done by Escolas, Escolas, and Bartone (2012), the present study examined the relationship between personality hardiness and adult attachment style to the presence of burnout in a sample of licensed professional nurses.

Literature Review Related to Key Variables

For this study, burnout, personality hardiness, and adult attachment style have been chosen as the key variables. Burnout is a known contributor to the nursing shortage (Edward & Hercelinskyj, 2006). As such, factors that pertain to nurse burnout are of critical investigative importance while in search of a nursing shortage solution.

Personality hardiness is recognized as a factor in stress perception and coping response (Van Servellen et al., 1994) and has also been implicated as an associated factor in the presence of burnout (Gustafsson et al., 2009).

Attachment-related behaviors have become increasingly investigated by researchers in part because attachment style impacts stress perception and coping ability. Indeed, insecure attachment has been found to be associated with poor coping and career burnout (Malach-Pines, 2004). Attachment also may moderate the perception of stressful experiences (Mikulincer & Shaver, 2007). Malach-Pines (2004) suggested additional research on attachment and burnout because secure attachment allows people to have the ability to positively appraise stressful experiences and therefore cope effectively. Hardiness is also a known protective factor against stress. Like attachment style,

hardiness has also been suggested as developing from early life experiences (Khoshaba & Maddi, 1999). Attachment style can be changed (Levy, Ellison, Scott, & Bernecker, 2011) and, as mentioned earlier, hardiness can be taught and learned (Maddi et al., 1998).

Hardiness in Nursing

As previously discussed, nursing is a high-stress career field (Garrosa et al., 2008; Hodges & Grier, 2004) making the understanding and management of stress a high priority for healthcare, particularly in terms of burnout prevention. Perceptions of stress among nurses are highly variable (McVicar, 2003). Research in nurse stress has determined that that personality trait of hardiness influences the perception of stress (McVicar, 2003)—and therefore the response to stress as well—thereby increasing one’s ability to successfully adapt to the environment (Hurst & Koplín-Baucum, 2005). Indeed, high-hardy nurses have generally reported less work-related stress than low-hardy nurses (Van Servellen et al., 1994) and (in the case of nurse managers) also use less sick time (Judkins et al., 2006). Furthermore, nurses high in hardiness have lower burnout scores than nurses who are low in hardiness (Garrosa et al., 2008), demonstrating that hardiness is a protective factor against burnout and is an important consideration when developing burnout interventions for nurses (Queiros et al., 2013). More recent research has found that greater hardiness and lower perceived stress significantly predicted happiness in nurses (Abdollahi, Talib, Yaacob, & Ismail, 2014). In general, however, hardiness has been shown to be one of the best dispositional predictors of well-being in the past several decades (Eschleman, Bowling, & Alarcon, 2010). Research has repeatedly indicated hardiness is a protective mechanism for nurses against stress and hardiness training has

been suggested as an overall beneficial intervention (Abdollahi et al., 2014). Nursing stress factors are similar to burnout factors, so hardiness training would likely aid in the prevention of burnout by reducing the perception (and impact) of stress (Garrosa et al., 2008).

Burnout in Nursing

According to Pines and Aronson (1988), burnout tends to affect highly motivated people that excitedly and enthusiastically enter their professions “on fire” and hoping the work will provide a sense of meaning to their lives (pp. 10-11). As such, the issue of burnout is considered especially hazardous for people in the human services field and other helping professions, such as nursing (Pines & Aronson, 1988). Research by Eley, Eley, Bertello, and Rogers-Clark (2012) adds that people who enter the field of nursing are generally caring, helpful, sociable, cooperative, prefer team work, have a “need” to care for others, and consider nursing as a profession a personal calling. Nurses are considered “particularly susceptible” to developing burnout (Demerouti, Bakker, Nachreiner, & Schaufeli, 2000, p. 455). Evidence of this susceptibility can be seen in the current nursing shortage.

The development of burnout (physical, emotional, and mental exhaustion) will have a negative impact on a nurse, partially due to the feelings of failure (Malach-Pines, 2004). Unfortunately, burnout will also have an impact on the attitudes, the quality of nurse relationships with patients, and the level of care they are able to provide (Stewart & Terry, 2014). However, burnout symptoms can vary widely, depending upon setting and type of work (Ostacoli et al., 2010), for example. Queiros et al. (2013) investigated the

concept of burnout among hospital nurses. Using an interactionist approach, they examined some of the findings in the literature regarding common socio-demographic factors related to stress and burnout in nurses. Among the variables studied were the components of job satisfaction and hardiness, which were both found to be predictive of the variability of burnout in all three dimensions. Implications from the study results included exploring possible interventions aimed at increasing hardiness levels and developing training programs to enhance coping and emotional regulation skills to help with the emotional demands related to work and family (Queiros et al., 2013).

Other research on nurse burnout found that burnout scores for palliative care nurses were significantly lower than the other areas of internal medicine, oncology, and hematology that were examined (Gama, Barbosa, & Vieira, 2014). These researchers also found that a secure attachment style was associated with low levels of emotional exhaustion and depersonalization, both of which are components of burnout (Gama et al., 2014).

Unfortunately, burnout is a complex phenomenon. Malach-Pines (2004) suggested that burnout theory and research should “move to a greater focus on personal factors” (p. 77) in addition to the more traditional research focus that has been on the job itself and on the organization and work setting. In particular, attachment theory is relevant in the case of burnout development (Malach-Pines, 2004). Indeed, the work life of an individual does seem to echo their established attachment patterns. One study found that nurse values, the perception of fairness, and rewards were found to be “especially significant” for nurses who are more likely to experience burnout and leave their jobs

(Leiter & Maslach, 2009, p. 337). The perception of unfair or unequal treatment on the job seemed to play a role in the development of cynicism, which is a dimension of burnout (Leiter & Maslach, 2009).

Attachment Style

Attachment theory has been examined across a wide variety of phenomena and in the workplace, but some have stated that attachment still has not received the attention it deserves (Harms, 2010). Indeed, research on nurse attachment style and career burnout is sparse. Furthermore, measures of attachment have been developed for research purposes, but may also be highly beneficial for training, staff retention, and staff support purposes (Harms, 2010). Additional research into the many factors related to and influenced by attachment style is needed to further our understanding (Cassidy, Jones, & Shaver, 2013) and aid in the development of effective interventions against burnout. The nursing field would especially benefit from additional research on the subject of attachment.

Kaya (2010) recognized attachment style as an important factor to consider when looking at relationship satisfaction, as well as a method for examining the impact of early experiences on later “emotional regulation, stress reactions and interpersonal behavior” (p. 666). Investigating nursing students, Kaya (2010) used this framework to try to better understand how to support the student nurse toward eventual entry and success in the nursing profession. The study results found that many of the factors studied influenced nursing student attachment style, to include nurse number of siblings, age, and number of past relationships. Insecure attachment scores were also found to be lower at graduation from the nursing program. It was suggested that nurse educators might benefit by taking

attachment theory into account for their nursing students. Educators being more inclusive and supportive of the students in nursing programs (who may be struggling with more than just the coursework) was recommended (Kaya, 2010). This study was conducted in a nursing school in Turkey. Additional investigation in other nursing schools must be done before results can be generalized to all nursing students, but the findings are compelling. As Kaya (2010) stated, “It is important for nurses to have a secure attachment style both as a caregiver and as a member of the healthcare team” (p. 672). The value of the examination of attachment styles in nursing education environments and in nursing students as the future nursing workforce is being increasingly recognized. More work is needed to examine the impact of attachment style in nursing, especially with regard to stress perception and burnout.

A review of the research in the literature has shown that attachment style is an important consideration. One study in the field of nursing found that the nurse-to-patient relationship, including nurse demonstration of empathy toward the patient, may be affected by both the nurse and the patient attachment styles (Khodabakshs, 2012). In a systematic review of research in the health and human service career fields, West (2015) found that secure attachment style was associated with lower levels of burnout. Ten studies were reviewed under the umbrella category of “health and human services.” Three of these ten studies involved nurses (oncology nurses, dialysis nurses, and nurses working in hospitals) (West, 2015). Other research in health care/human services professions found that ambulance workers and other first responders are exposed to acute stressors in the form of “critical incidents” that may have long-range consequences.

Findings indicate that ambulance workers who have insecure attachment patterns also have maladaptive coping strategies, prolonged short-term distress, and current emotional symptoms after exposure to critical incidents (Halpern, Maunder, Schwartz, & Gurevich, 2012). More research on attachment related issues is needed in health services and, specifically, in nursing.

Related Research on Key Variables

Researchers have been interested in attachment style for some time, adult attachment style in particular, and how it might impact various interactions during the lifespan. Over two decades ago, Mikulincer, Florian, and Weller (1993) examined adult attachment style and responses to a wartime environment. Among the findings were that individual attachment style influenced stress perception and coping. At that time, it was suggested that additional research examine the association between attachment styles and other stress-buffering personality resources, such as hardiness (Mikulincer et al., 1993). Attachment and the stress buffering personality trait of hardiness are considered to be independent constructs. However, other research has shown that securely attached individuals may have certain qualities – such as enhanced self-control (Collins & Read, 1990), self-confidence (Mikulincer, Florian, & Weller, 1993), and efficient coping skills (Mikulincer & Florian, 1998, in Neria et al., 2014) that may serve as the foundation for the development of hardiness (Neria et al., 2014).

Attachment style has the potential to have an impact. In a study on attachment style and organizational behavior, Simmons, Gooty, Nelson, and Little (2009) examined employees and supervisors of an assisted living center. Among the results found was that

having a secure attachment style had a significant, negative relationship with burnout. In addition, the authors indicated that having a secure attachment style has important implications for working adults. Supervisors may play the role of attachment figures, and, for those that are securely attached, the relationship to the supervisor can positively affect work performance and protect the employee against burnout (Simmons et al., 2009). Findings also indicated that a secure attachment style had a significant positive relationship with hope and trust (Simmons et al., 2009).

Attachment theory may provide important insights into work behavior because it reflects how a person views themselves, which will influence how that person interacts with others (Richards & Schat, 2011). Richards and Schat (2011) investigated adult attachment in organizations and found that attachment styles were associated with certain kinds of behaviors at work, with citizenship behaviors and emotional behaviors being especially notable. In this study (Richards & Schat, 2011), participants with an avoidant attachment style typically disengaged from others and resisted seeking support. Anxiously attached individuals would seek support, but also would be more likely to think about quitting. Richards and Schat (2011) found that attachment explained some of the reasons why individuals behave as they do at work. Attachment anxiety and avoidance was found to negatively impact work cohesion in a sample of firefighters (Landen & Wang, 2010). Lower psychiatric staff anxiety and avoidance scores were found to be associated with more positive therapeutic relationships with psychiatric patients (Berry et al., 2008). Attachment styles can be modified during treatment and might be considered a treatment goal in some situations (Levy et al., 2011). Attachment

style influences working preference as well. Securely attached individuals tend to value independence. Conversely, anxiously attached people tend to place more value on collaboration, support, and security (Malach-Pines, 2004).

Attachment style is associated with hardiness. In a study of 434 young adults in the Israeli Defense Forces, researchers examined the associations among attachment, hardiness, and mental health (Neria et al., 2014). The authors found significant associations between attachment scores and hardiness. Specifically, secure attachment was found to be positively associated with hardiness general score, commitment facet score, and control facet score. Avoidant and ambivalent attachment styles were negatively related to those same scores. No significant relationship was found between the challenge facet score and the attachment variables. Interestingly, attachment style and hardiness were found to independently contribute to mental health outcomes of the study participants (Neria et al., 2014).

Attachment style and hardiness work together to protect against stress and impact well-being. Escolas, Escolas, and Bartone (2014) investigated attachment style and hardiness in a group of active duty military personnel. These researchers questioned whether these two factors would impact mood (which is considered an indicator of well-being). Secure attachment and hardiness were found to be beneficial against stress. In fact, attachment style was positively associated with overall hardiness and both constructs were associated with positive mood. Interestingly, other research has indicated that the two constructs seemed to work together—when one was lacking, the other helped (Zakin

et al., 2003). Research suggestions included using attachment focused therapy to help with personal growth and development in the military (Escolas et al., 2014).

Attachment style and hardiness needed to be examined in the field of nursing. In the nursing field, research should aim to discover every protection available for nurses to aid in the prevention of burnout. Burnout is assumed to play a mediating role between the impact of stressors and work outcomes (Leiter & Maslach, 2009). If hardiness is a protector against stress and the development of burnout, and so is a secure attachment style, what effect do hardiness *and* attachment have on the presence of burnout in licensed professional nurses? Will the two constructs work together to protect licensed professional nurses against burnout?

The present research asked: (a) is there a relationship between adult attachment style and hardiness level among nurses? (b) is there a relationship between adult attachment style and each hardiness component (commitment, control, and challenge) among nurses? And, most importantly, (c) does hardiness level and attachment style have an interaction effect on the presence of burnout among nurses?

Summary and Transition

There are many factors that contribute to the nursing shortage. The literature reviewed suggests that burnout is one of the major factors that results in nurses leaving the field of nursing. Research on nurse stress and burnout has focused on determining the various reasons nurses burn out and the many possible protections that might be used to shield nurses from the development of burnout. Both personality hardiness and adult attachment styles affect the overall perception of stress and protect against burnout. An

individual's perception of stress may result in the successful adaptation to a stressful environment or to the unsuccessful adaptation and subsequent development of burnout. Prior research indicated that attachment style is associated with hardiness (Neria et al., 2014), both factors impact well-being and are beneficial against stress (Escolas et al., 2014) in military populations and the two factors may even work in a compensatory manner (Zakin et al., 2003). In particular, secure attachment was found to be associated with general hardiness score and both attachment style and hardiness contributed to the mental health outcomes of study participants (Neria et al., 2014). What has not been addressed in the literature is research on the influence of personality hardiness and adult attachment style on the presence of burnout, specifically in the field of nursing. Might these two constructs also work together to protect licensed professional nurses against the development of burnout? This research will fill that gap in the literature.

In Chapter 3, I cover the following topics: study overview, research design, a detailed description of the examination of the independent variables of hardiness and adult attachment style and their influence on the presence of the dependent variable of burnout in licensed professional nurses. Chapter 3 also includes a description of the targeted research population, a discussion and description of the instruments used in this research, and an outline of the procedures that were used to collect the data. Finally, ethical concerns regarding this study are detailed and discussed.

Chapter 3: Research Method

Introduction

The purpose of this quantitative study was to examine the two independent variables, adult attachment style and personality hardiness, in relation to the presence of the dependent variable, burnout, in licensed professional nurses. Although there has been an abundance of research on the nursing shortage and the many possible factors that contribute to the nursing shortage crisis, additional research is needed to determine any possible protective factors against the development of burnout in nurses. Both personality hardiness (Queiros et al., 2013) and having a secure attachment style have been found to be a protective against burnout (Malach-Pines, 2004). After an extensive search of the literature, no studies were found that examined these two protections, together, in relation to burnout in licensed professional nurses.

In Chapter 3, I cover the following topics: the research design and rationale, methodology (including population, recruitment procedures, and study instruments), threats to validity, and finally, ethical procedures and concerns.

Research Design and Rationale

The independent variables in this research study are the personality trait of hardiness as measured by the DRS-15 (Bartone et al., 2012) and adult attachment style (secure, fearful, preoccupied, and dismissive) as measured by the ECR-R (Fraley et al., 2000). The dependent variable is burnout as determined by the BMS (Malach-Pines, 2005). The present research is quantitative in nature, which is consistent with the previous research on the variables in question. Quantitative design is also appropriate

here due to it being consistent with furthering the understanding of the concept of burnout as it relates to hardiness level and adult attachment style using the instruments and statistical analyses intended and described herein. A survey method was employed to obtain the self-report information from the participants because it is relatively low in cost and information can be gathered in a timely manner.

Methodology

Population

The population for the present research was licensed professional nurses working in a healthcare environment in the United States. The U.S. Bureau of Labor Statistics (BLS) reported 2,745,910 licensed nurses nationally (May, 2015), with healthcare settings making up at least 75% of the industry employment (BLS, 2016). Using these reported statistics, the population of licensed professional nurses working in a healthcare setting in the United States is estimated at approximately two million.

Sampling and Sampling Procedures

The sample of nurses for this study was conveniently obtained via the internet using SurveyMonkey, which is a secure, online tool that has been available since 1999 and is widely used in both business and academic research. SurveyMonkey ensures that university Institutional Review Board [IRB] requirements are upheld, making it a convenient resource for research (SurveyMonkey, 2016). Inclusion criteria for the study included being a licensed professional nurse aged 18 or older, employed as a nurse, and working in a healthcare setting. Certified nursing aids (CNAs) were not considered licensed nurses and thus were excluded from this study.

A power analysis was completed using guidance from the literature (VanVoorhis & Morgan, 2007) to determine the sample size for the present study. Using the accepted value for power (.80) and alpha (.05) and a rule of thumb for correlation or regression, the formula $N > 50 + 8m$ (where m is the number of independent variables) was used to determine sample size needed. From the literature, (Escolas et al., 2014), a medium effect size was estimated for this research (average $R^2 = 0.13$). Thus, a sample of at least 114 licensed professional nurses will be needed (VanVoorhis & Morgan, 2007).

Procedures for Recruitment, Participation, and Data Collection

Participants for the present study were recruited through an online invitation to participate in the study that was conducted through SurveyMonkey. The invitation to participate and a link to the study were posted to my own Facebook page. Nurses and other medical professionals were asked to share the invitation and link with other nurses and nurse discussion groups that they know as well. This type of snowball sampling through the Internet was chosen for the sampling strategy because of the ease of use and increasing popularity in online research. PsychData, an online research service, recommends finding a person or persons well-known among the target sample and ask them to distribute the survey as an effort toward successful recruitment of participants (PsychData, 2013).

The research study began with informed consent. With informed consent, participants were advised of the nature of the study, the overall purpose of the research, a guarantee of confidentiality and anonymity, that participation was voluntary, and that they had the right to withdraw at any time. Next, general demographic information was

obtained from participants. The survey instruments to measure for hardiness, adult attachment style, and burnout (described in the next section below) followed.

At the conclusion of the surveys, participants were provided with a debriefing page. The debriefing page thanked participants for taking part in the research, provided a summary of the nature of the study, provided assurances pertaining to anonymity, and provided contact information for me as the researcher, as well as the Research Participant Advocate at the Office of Research Integrity and Compliance at Walden University. Participants were able to print the debriefing page for future reference, if they chose. Participants were able to then click “done” or simply close their browser at any time to end participation in the study. Because the surveys were anonymous, there was no additional ability to contact participants. I accessed the completed surveys through SurveyMonkey, an online business site created for gathering research data. I purchased a professional membership which included design, secure storage of the data, and access to downloadable results that could be imported into SPSS for analysis.

Instrumentation and Operationalization of Constructs

Demographic questionnaire. General demographic information of the research participants, including their age, gender, race, years of experience in nursing, work setting, and type of nurse, was collected using a basic demographic questionnaire. Demographic independent variables are often measured to determine sample characteristics, but also because demographic information has the potential to influence the outcome of a study. Statistical procedures can be used to control for demographic information, if needed (Creswell, 2009).

Dispositional Resilience Scale–Revised. For this study, hardiness was measured using the Dispositional Resilience Scale–Revised (DRS-15) developed by Bartone (2007). The DRS has been continually refined over time (Bartone, Hystad, Eid, & Brevik, 2012). The DRS-15 has been used repeatedly to measure for hardiness in military and non-military populations and has been found to be highly reliable (Bartone et al., 2012) with the test-retest reliability coefficient found at .78 overall (Bartone, 2007). The DRS-15 is also consistent, with Cronbach’s alpha coefficient at .78 for the 15-items (Escolas et al., 2014), and .82 for total measures in another sample military personnel (Bartone, 1999). Cronbach’s alpha was .77 for commitment, .68 for control, and .69 for challenge in the military sample (Bartone, 1999). The DRS-15 is a 15-item self-report scale that measures hardiness along the three dimensions of commitment, control, and challenge using a 4-point Likert scale ranging from 0 (*not at all true*) to 3 (*completely true*) (Bartone et al., 2012). An example statement along the control dimension on the DRS-15 is, “Planning ahead can help avoid most future problems.” Each statement is rated by the participant during the survey. Scores are reversed for negatively keyed items and then all 15 scores are added by the researcher. A score of 39 or above indicates very high hardiness (about 7% of people); a score of 34-38 indicates high hardiness (24%); a score of 28-33 indicates average hardiness (38%); a score of 22-27 indicates low hardiness (24%), and a score of 21 and under indicates very low hardiness (7%). The DRS tools were available for academic use for a one-year licensing fee of \$37.

Experience in Close Relationships–Revised. Adult attachment style was assessed using the Experience in Close Relationships Revised (ECR-R; Fraley et al.,

2000). The ECR-R, also a self-report measure, is composed of 36 questions rated on a 7-point Likert scale. Scores range from 1 (*strongly agree*) to 7 (*strongly disagree*).

Attachment is measured along two dimensions, scoring for attachment anxiety and avoidance. Participants rate statements related to close relationships, such as, “I worry a lot about my relationships” by giving it a score. Scores can be used to obtain an exact attachment style by plotting the two scores into four categories: secure, fearful, preoccupied, and dismissive. A secure attachment style is defined by low anxiety and low avoidance scores; a preoccupied attachment style is defined by high anxiety and low avoidance; a fearful attachment style is defined by high anxiety and high avoidance scores; a dismissive attachment style is defined by low anxiety and high avoidance scores. The ECR-R has demonstrated good psychometric properties with test-retest correlations for the anxiety and avoidance scales at over .90 in a sample of undergraduate students (Sibley, Fischer, & Liu, 2005) and elsewhere internal consistency reliability scores have been found at .90 or higher (Fraley et al., 2000). Permission to use this instrument was not needed for academic purposes (Fraley, 2012).

Burnout Measure–Short Version. Burnout was assessed using the Burnout Measure Short Version (BMS; Malach-Pines, 2005). The BMS is a 10-item version of the original 21-item Burnout Measure, which was originally developed for use in occupational and non-occupational groups and was translated for use in other countries (Malach-Pines, 2005). The (BMS) evaluates burnout on a 7-point frequency scale with scores from 1 (*never*), 4 (*sometimes*), to 7 (*always*). The BMS instructs participants to answer questions about work, such as, “When you think about your work overall, how

often do you feel tired?" Scores are added for each of the 10 questions then the total is divided by 10 to determine average score. A score of between 3.5 and 4.4 indicates burnout. Scores above 4.5 indicates serious burnout (Malach-Pines, 2005). The BMS was tested in several samples, including 216 dialysis nurses, with internal consistency coefficients of .88 and a test-retest coefficient of .74 (Malach-Pines, 2005). Permission to use this instrument was not needed because it is available in the public domain (Malach-Pines, 2005).

Data analysis plan. SPSS software was used to analyze the study data. In order to ensure that the data were cleaned and screened for errors, such as missing data and outlier influences, descriptive statistics were run. Descriptive statistics were computed to determine the characteristics of the sample of nurses, as well as the means, standard deviations, and distributions. An ANOVA was used to determine whether the various attachment groups (secure, fearful, preoccupied, and dismissive) differed in total hardiness score. An ANOVA is similar to t-tests, but reduces the possibility of a Type 1 error. ANOVAs are used when multiple comparisons are needed. A Kruskal-Wallis H test was conducted to determine whether the attachment groups differed in the individual hardiness facet scores of commitment, control, and challenge. An ANOVA also assessed the impact of adult attachment style and hardiness score on the presence of burnout in the study sample of licensed professional nurses. If an interaction was found, a multiple regression analysis was planned to predict the value of a dependent or outcome variable (the presence of burnout) based on the value of two or more independent (predictor) variables (hardiness level and adult attachment style) (Mitchell & Jolley, 2004).

The following research questions were examined during this study:

1. Is there a relationship between adult attachment style (secure, fearful, preoccupied, and dismissive) and overall hardiness score among licensed professional nurses?

H1_o: There is no relationship between adult attachment style (secure, fearful, preoccupied, and dismissive) and hardiness among licensed professional nurses.

H1_a: There is a relationship between adult attachment style (secure, fearful, preoccupied, and dismissive) and hardiness in licensed professional nurses.

An analysis of variance (ANOVA) was used to assess whether the different attachment groups differed in their total hardiness scores.

2. Is there a relationship between attachment style (secure, fearful, preoccupied, and dismissive) and the individual components of hardiness (commitment, control, and challenge) among licensed professional nurses?

H2_o: There is no relationship between adult attachment style (secure, fearful, preoccupied, and dismissive) and the components of hardiness (commitment, control, and challenge) in licensed professional nurses.

H2_a: There is a relationship between adult attachment style (secure, fearful, preoccupied and dismissive) and the components of hardiness (commitment, control, and challenge) in licensed professional nurses.

This question was answered with a Kruskal-Wallis *H* test.

3. Is there an interaction between adult attachment style and hardiness on the

presence of burnout symptoms (physical, emotional, and mental exhaustion) in licensed professional nurses?

H3_o: There is no interaction between adult attachment style and hardiness on the presence of burnout symptoms (physical, emotional, and mental exhaustion) in licensed professional nurses.

H3_a: There is an interaction between adult attachment style and hardiness on the presence of burnout (symptoms of physical, emotional, and mental exhaustion) in licensed professional nurses.

This question was answered with the ANOVA. Post hoc tests were also conducted to further examine the relationships between the variables.

Threats to Validity

Possible threats to external validity include the fact that this study and the results are unique to licensed professional nurses working in the United States at this time. Results from this study cannot be generalized to other populations or to all types of nurses. Future research may want to replicate this study, focus on other geographic areas, other populations, or perhaps one specific type of nurse (emergency room nurses or geriatric nurses, for example).

Threats to internal validity include selection validity. It is possible that the nurses who volunteered for participation in this study, via SurveyMonkey, were predisposed toward certain characteristics (such as a specific level of hardiness, for example). Additional research will be needed before results can be generalized to licensed professional nurses in general. Threats to statistical conclusion validity were minimized

by ensuring adequate power, having a large sample size, and using an appropriate statistical analysis method for this study.

Ethical Procedures

Approval to perform this study was obtained from the Walden Institutional Review Board prior to conducting the study (IRB, Approval No. 07-26-17-0034608). Informed consent was obtained from each participant prior to their participation in the study. In addition, all study participants were informed of the aspects of the study, including the fact that study participation was voluntary and that the participant may have withdrawn from the study at any time. If participants had questions or concerns about the study, my contact information was provided, along with the contact information of the Walden University Research Participant Advocate. The information from participants was obtained online through SurveyMonkey, information obtained and survey answers were anonymous, and research raw data (though anonymous) is now stored in a locked filing cabinet and will be kept for a minimum of 5 years. At the conclusion of the 5-year minimum, the raw research data will be shredded using an electric shredding machine. Files associated with this study that are stored on my computer will be destroyed via permanent file deletion.

Summary

The purpose of this study was to explore the independent variables of personality hardiness and adult attachment style to the presence of the outcome variable of burnout in licensed professional nurses. Many studies have been conducted to examine each of the predictor (independent) variables of hardiness or attachment style to burnout in several

populations, but no studies could be found that have examined these predictor variables together to see if they have a compensatory effect when it comes to the presence of burnout in licensed professional nurses. The present quantitative research used an online survey method to investigate the combined influence of hardiness and adult attachment style on the presence of burnout in the sample of 128 licensed professional nurses.

Chapter 4 presents the data analysis and results of this study.

Chapter 4: Results

Introduction

The purpose of this quantitative study was to examine the two independent variables, adult attachment style and personality hardiness, in relation to the presence of the dependent variable, burnout, in licensed professional nurses. Although there has been an abundance of research on the nursing shortage and the many possible factors that contribute to the nursing shortage crisis, additional work is needed to determine any possible protective factors against the development of burnout in nurses. Personality hardiness has been deemed a protective factor against burnout (Queiros et al., 2013). Having a secure attachment style has also been found to be a protective factor against burnout (Malach-Pines, 2004). After an extensive search of the literature, no studies were found that examined both of these protections, together, in relation to burnout in licensed professional nurses. This research fills that gap in the literature.

The following research questions and hypotheses were at the core of this study:

1. Is there a relationship between adult attachment style (secure, fearful, preoccupied, and dismissive) and hardiness among licensed professional nurses?

*H*_{1o}: There is no relationship between adult attachment style (secure, fearful, preoccupied, and dismissive) and hardiness among licensed professional nurses.

*H*_{1a}: There is a relationship between adult attachment style (secure, fearful, preoccupied, and dismissive) and hardiness in licensed professional nurses.

2. Is there a relationship between adult attachment style (secure, fearful, preoccupied, and dismissive) and the components of hardiness (commitment, control, and challenge) in licensed professional nurses?

H2_o: There is no relationship between adult attachment style (secure, fearful, preoccupied, and dismissive) and the components of hardiness (commitment, control, and challenge) in licensed professional nurses.

H2_a: There is a relationship between adult attachment style (secure, fearful, preoccupied and dismissive) and the components of hardiness (commitment, control, and challenge) in licensed professional nurses.

3. Is there an interaction between adult attachment style and hardiness on the presence of burnout symptoms (physical, emotional, and mental exhaustion) in licensed professional nurses?

H3_o: There is no interaction between adult attachment style and hardiness on the presence of burnout symptoms (physical, emotional, and mental exhaustion) in licensed professional nurses.

H3_a: There is an interaction between adult attachment style and hardiness on the presence of burnout symptoms (physical, emotional, and mental exhaustion) in licensed professional nurses.

In this chapter, I provide information on the data collection procedures, along with the sample characteristics, descriptive statistics, and a summary of the results for the three research questions and hypotheses.

Data Collection

Once approval for this study was received from the Walden University Institutional Review Board (IRB, Approval No. 07-26-17-0034608), a professional membership with SurveyMonkey was purchased. The study questionnaire was then created in SurveyMonkey using the IRB application questions as a guide. Before posting my study to Facebook as the approved SurveyMonkey method of collecting surveys (“collector”), survey responses were set to “anonymous.” The SurveyMonkey link to the study was then posted to my Facebook page. Surveys were collected through Facebook and SurveyMonkey over the course of 7 weeks.

Several people on Facebook made requests to be able to share the survey via email or Facebook messenger, but I had not set these methods as collectors in SurveyMonkey. In order to accommodate these requests, I submitted a request for a procedural change to the IRB to widen data collection to include email and Facebook messenger as additional routes of collection (collectors). Permission was obtained from the IRB, but while working to create the new collectors in SurveyMonkey, I became aware that Facebook messenger and email could not guarantee anonymity. Facebook Messenger and email were, therefore, not added as additional routes of survey collection.

The Facebook post targeted nurses directly, plus friends of nurses to share with their nurse friends (snowball sampling). Through Facebook, a total of 189 surveys were collected, but some of these surveys had to be discarded. For example, there were several surveys where the participant agreed to participate, but then did not complete any of the survey. In addition, there were other respondents who stopped after Question 22, which

marked the end of the first page, but only included the first measure of three total measures. I suspect that the participants exited out of the survey, thinking it was over, rather than clicking “next” to continue on with the study. Incomplete surveys were discarded. Surveys completed by non-nurses or Certified Nursing Assistants were excluded from the data analysis. Surveys completed by retired nurses were also excluded from data analysis. A total final sample for this research was 128 surveys completed by licensed professional nurses.

Demographic information was collected from the study participants to include gender, age range, and ethnicity. Participant general demographics are displayed in Table 1 below.

Table 1

Demographic Characteristics of the Sample (N = 128)

Demographic characteristic	<i>n</i>	%
Gender		
Male	1	0.78
Female	126	98.44
Unknown	1	0.78
Age		
18-29	19	14.84
30-39	29	22.66
40-49	28	21.87
50-59	24	18.75
60-64	17	13.28
65+	11	8.59
Ethnicity		
Black	2	1.56
American Indian/Alaska Native	1	0.78
Asian	2	1.56
Hispanic	3	2.34
Multiple Races	3	2.34
Native Hawaiian/ Pacific Islander	0	0.00
White	117	91.40

Note. Due to rounding, percentage totals may not equal 100.

Consistent with most prior research in nursing, most of this nursing study sample was female (98.44%) and White (91.40%). The percentage of female to male participants in this study differed from the larger population of nurses. Males currently make up approximately 10% of nurses in the larger population (USDHHS, 2010), while the study sample of nurses was less than 1% male. This finding will be discussed in more detail in Chapter 5 under study limitations. And, though nursing is growing in diversity, minority nurses remain under-represented in the larger population and also in the study sample of nurses. In 2008, the larger population of Registered Nurses was comprised of 83.2%

White, 5.4% Black, 3.6% Hispanic, 5.8% Asian/Native Hawaiian, 0.3% American Indian/Alaska Native, and 1.7% Multiracial nurses (U.S. Department of Health and Human Services [USDHHS], 2010). The study sample was found to be similar in ethnicity and largely representative of the larger population.

Other information collected from the sample of nurses included work location, type of nurse, and years of experience in nursing. The majority of the sample worked in a hospital setting (59.37%), which is consistent with the larger population trends. For example, 62.2% of registered nurses worked in a hospital setting in 2008 (USDHHS, 2010). Most of the study sample of nurses worked as registered nurses (84.38%). Years of nursing experience in the study sample ranged from 0.5 years to 48.0 years, with the mean years of experience at $M = 18.40$ years ($SD = 14.89$).

Results

The final sample for this study was 128 nurses, mostly female (98.44%), mostly registered nurses (84.38%), the majority worked in a hospital setting (59.37%), and the mean years of experience was 18.40 years. SPSS Software Version 21 was used for data analysis. An ANOVA assumes that there is a continuous dependent variable, the independent variable is categorical with two or more independent groups, and there is independence of observation. Before the analysis was conducted, scores were tallied for each of the constructs.

Attachment styles were determined by calculating total scores for both attachment-related anxiety and attachment-related avoidance and plotting those scores on a four-quadrant graph. Low anxiety and low avoidance scores results in a secure

attachment style; high anxiety and low avoidance equals preoccupied attachment; high anxiety and high avoidance equals fearful attachment; and low anxiety, high avoidance equals dismissive attachment. Pertaining to attachment styles, this study was somewhat proportional with prior research in the general population. Prior research has shown that the majority of a control group (of combat soldiers) was securely attached (79%), while the test group was slightly lower (68%) (Zakin, et al., 2003). The sample of nurses in this research was similar, with 75% ($n = 96$) being secure in attachment style. The results of this study for the insecure attachment styles were consistent with what has been found in other prior research as well (Zakin et al., 2003). Of the nurses that participated in this study, 25% were found to be insecurely attached: 11 were categorized as preoccupied (8.59%), eight were fearful (6.25%), and 13 were dismissive (10.16%).

Hardiness level in the sample population was also consistent with prior research (Bartone, 2014). Using the DRS-15 scoring instructions sheet, total hardiness levels were calculated and then divided into the 5 categories, or levels, of hardiness: Very Low (a score of 21 or less), Low (a score of 22 to 27), Average (a score of 28 to 33), High (a score of 34 to 38), and Very High (a score of 39 or more). The scoring information and norms data from the DRS-15 indicated that about 7% of adults are Very Low in Hardiness, 24% are Low, 38% are Average, 24% are High Hardiness, and 7% are Very High in hardiness (Bartone, 2014). This study sample of nurses varied slightly from the norms, with only 4.69% found to be Very Low ($n = 6$), 18.75% were Low ($n = 24$), fully half (50.00%) were Average ($n = 64$), 17.97% were High in hardiness ($n = 23$), and 8.59% were Very High in hardiness ($n = 11$).

Burnout scores were totaled by adding the answers on the Burnout Measure—Short Version questionnaire and dividing the total score by 10. A score of 2.4 or lower is considered very low burnout; 2.5 to 3.4 is considered low burnout; 3.5 to 4.4 indicates that burnout symptoms are present; 4.5 to 5.4 is considered serious burnout; a score of 5.5 or higher is said to be very serious burnout and in need of immediate professional help (Malach-Pines, 2005). In the study sample of nurses, very low and low hardiness had the highest mean burnout scores. Fearful attachment and dismissive attachment also had the highest mean burnout scores. Mean burnout scores for each of the four attachment styles and the five hardiness categories are displayed in Table 2.

Table 2

Burnout Scores by Hardiness Level and Attachment Style

Category	Mean	<i>n</i>	Std. deviation	Std. error of mean
Attachment style				
Secure	3.15	96	1.08	.11
Preoccupied	4.09	11	1.37	.41
Fearful	4.93	8	1.25	.44
Dismissive	4.81	13	1.22	.34
Total	3.51	128	1.29	.11
Hardiness level				
Very low	5.52	6	1.14	.47
Low	4.38	24	1.25	.25
Average	3.49	64	1.10	.14
High	2.72	23	.77	.16
Very high	2.34	11	.88	.27
Total	3.51	128	1.29	.11

Research Question 1 asked whether a relationship exists between adult attachment style (secure, preoccupied, fearful, and dismissive) and total hardiness among licensed

professional nurses. Participants' scores on the Experiences in Close Relationships Questionnaire (ECR-R) were classified into the four attachment categories by plotting the participant scores for both attachment-related anxiety and attachment-related avoidance onto a graph of the four attachment category quadrants. The four attachment categories, or quadrants, were: Secure ($n = 96$), Fearful ($n = 8$), Preoccupied ($n = 11$), and Dismissive ($n = 13$). Total hardiness score for each participant was determined by adding scores on the DRS-15 for each of the hardiness facets of commitment, control, and challenge. A one-way ANOVA was conducted to determine if total hardiness score was different for licensed nurses with different attachment styles. There were no significant outliers in the data, as assessed by calculations of skewness and kurtosis. Data were normally distributed for each attachment group of secure, fearful, preoccupied and dismissive, as assessed by a Shapiro-Wilk test ($p = .41, .17, .56, \text{ and } .29$, respectively). Homogeneity of variances was not violated, as assessed by Levene's test of homogeneity of variances ($p = .79$). Attachment style category as the categorical independent variable and total hardiness score as the continuous dependent variable yielded significant findings for attachment style and hardiness, $F(3, 124) = 6.77, p < .001$. The strength of the relationship, as indicated by partial η^2 , was .14. The overall sample means and standard deviations are displayed in Table 3.

Table 3

Total Hardiness Score by Attachment Style

Attachment style	n	Mean	Std. deviation	Std. error	95% Confidence interval for mean		Minimum	Maximum
					Lower	Upper		
Secure	96	31.84	4.94	.50	30.84	32.84	18	42
Preoccupied	11	27.91	3.81	1.15	25.35	30.47	21	32
Fearful	8	27.13	6.29	2.22	21.87	32.38	15	37
Dismissive	13	27.00	4.67	1.29	24.19	29.81	21	34
Total	128	30.72	5.24	.46	29.80	31.64	15	42

Least Significant Difference (LSD) tests indicated that nurses with the secure attachment style reported significantly higher levels of total hardiness than nurses with the other three insecure attachment styles. The null hypothesis that a relationship does not exist between attachment style and total hardiness was rejected. However, the three insecure attachment styles (preoccupied, fearful, and dismissive) did not differ significantly from each other. Results from the LSD tests are shown in Table 4.

Table 4

LSD Test for Total Hardiness and Attachment Style

Test	(I) Attachment category	(J) Attachment category	Mean difference (I-J)	Std. error	Sig.	95% Confidence interval	
						Lower bound	Upper bound
LSD	Secure	Preocc	3.94	1.57	.013*	.84	7.03
		Fearful	4.72	1.81	.010*	1.14	8.30
		Dismiss	4.84	1.45	.001*	1.97	7.72
	Preoccupied	Secure	-3.94	1.57	.013*	-7.03	-0.84
		Fearful	.78	2.29	.732	-3.74	5.31
		Dismiss	.91	2.01	.653	-3.08	4.90
	Fearful	Secure	-4.72	1.81	.010*	-8.30	-1.14
		Preocc	-.78	2.27	.732	-5.31	3.74
		Dismiss	.12	2.21	.955	-4.25	4.50
	Dismissive	Secure	-4.84	1.45	.001*	-7.72	-1.97
		Preocc	-.91	2.01	.653	-4.90	3.08
		Fearful	-.12	2.21	.955	-4.50	4.25

* $p < .05$

Research Question 2 asked if there was a relationship between adult attachment style (secure, fearful, preoccupied, or dismissive) and the individual scores for each of the facet components of hardiness (commitment, control, and challenge) in licensed professional nurses.

Individual ANOVAs were planned as the next tests for each of the hardiness facets of commitment, control, and challenge, with respect to attachment style category. However, a Shapiro-Wilk test indicated that the assumption of normal distribution was violated for secure attachment and commitment score. Skewness calculations confirmed the violation of the normality assumption, as did an examination of the boxplots.

A Kruskal-Wallis H test was conducted, therefore, instead of the planned ANOVAs, to determine if there were differences in commitment, control, and challenge scores among the four attachment groups. This H test is considered a nonparametric alternative to the one-way ANOVA and can be used when research data fail the assumptions of the one-way ANOVA (i.e. nonnormal distribution), though the Kruskal-Wallis H test has its own characteristics and assumptions.

The Kruskal-Wallis H test can be done on more than one dependent variable at a time, allowing commitment, control, and challenge scores to all be entered as dependent variables and attachment category entered as the independent variable for this analysis. It has revealed the distribution of the mean rank scores for the hardiness facet of control was similar for all four attachment groups. A visual inspection of the boxplot confirmed this finding. Facet scores for commitment and challenge were *not* similar for all groups, however: commitment $H(3) = 22.52, p < .001$, and challenge $H(3) = 7.83, p = .05$. A

visual inspection of the boxplots confirmed the finding that the distribution of the hardiness facet scores of commitment and challenge were not similar for all attachment groups. Means rank testing was performed for all the attachment group scores on each of the hardiness facet scores. Results for means rank testing are displayed in Table 5.

Table 5

Ranks for Hardiness Facets and Attachment Style

Hardiness component	Attachment style	<i>n</i>	Mean Rank
Commitment	Secure	96	73.04
	Preoccupied	11	44.50
	Fearful	8	23.75
	Dismissive	13	43.42
	Total	128	
Control	Secure	96	69.18
	Preoccupied	11	56.50
	Fearful	8	43.75
	Dismissive	13	49.46
	Total	128	
Challenge	Secure	96	68.19
	Preoccupied	11	45.55
	Fearful	8	75.81
	Dismissive	13	46.31
	Total	128	

To investigate the differences in distribution of scores, pairwise comparisons were performed using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons. The initial comparison showed that the difference in the distribution of scores for challenge across attachment styles was only significant for the secure attachment style category compared to dismissive attachment style category, $p = .04$. However, the adjusted significance for multiple comparisons for the secure attachment

style category as compared to dismissive on the challenge score was not significant, $p = .26$.

From this analysis for research question two, the hardiness facet of control scores were not found to be related to attachment style for the sample of licensed professional nurses. The hardiness facets score of challenge initially showed borderline significance ($p = .05$) between the attachment categories, but the post hoc pairwise comparison and adjusted p values did not show any significant differences for challenge scores between the four attachment styles. And finally, the post hoc pairwise comparisons found that the hardiness facet of commitment scores vary, particularly between the secure attachment style (mean rank = 73.04) and the fearful attachment style (mean rank = 23.75, $p = .002$), as well as between secure attachment style (mean rank = 73.04) and the dismissive attachment style (mean rank = 43.42, $p = .04$), with adjusted statistical significance.

Research Question 3 asked if there was an interaction between adult attachment style and hardiness on the presence of burnout in licensed professional nurses. A two-way factorial ANOVA was conducted to determine whether attachment style and hardiness, together, have an influence on burnout scores in licensed professional nurses. The assumption of homogeneity of variances was not violated, per the Levene's test, $p = .08$. Shapiro-Wilk tests indicated a violation in normality for average hardiness and secure attachment ($p = .02$) as well as average hardiness and preoccupied attachment ($p = .04$), though a Lilliefors Significance Correction showed no significant violations. ANOVAs are considered to be fairly robust against violations from normality, especially with a larger sample size, therefore, the two-way ANOVA was conducted.

The interaction between hardiness and attachment style did not have a significant relationship with burnout scores. A weak relationship was shown by partial eta squared (.03), confirming the findings. Results are shown in Table 6.

Table 6

Tests of Between-Subjects Effects

Burnout scores	Type III SS	df	Mean square	<i>F</i>	Sig.	Partial eta squared
Corrected model	98.55	15	6.57	6.49	.000*	.47
Intercept	546.24	1	7.79	539.80	.000*	.83
HarCat	31.15	4	7.79	7.70	.000*	.22
AttCat	12.91	3	4.30	4.25	.007*	.10
HarCat*AttCat	3.73	8	.47	.46	.881	.03
Error	113.34	112	1.01			
Total	1791.81	128				
Corrected total	211.89	127				

* $p < .05$

Although a significant interaction between hardiness and attachment style was not detected, hardiness and attachment style both impact burnout scores, individually and significantly. An analysis of the main effects was performed. Pairwise comparisons for hardiness by attachment style showed a significant difference in burnout scores for average hardiness between fearful attachment style and secure attachment style ($p = .030$). Burnout score for average hardiness was significantly different, $F(3, 112) = 4.70$, $p = .004$, partial eta squared = .11. Pairwise comparisons for burnout scores showed a significant difference for secure attachment between very low hardiness, high hardiness, and very high hardiness.

The category of very high hardiness only contained the secure attachment style; high hardiness contained secure, fearful, and dismissive attachment styles, but not preoccupied. Very low hardiness contained all attachment styles, including secure.

The main effect for attachment style showed significant differences in burnout scores for secure attachment, $F(4, 112) = 6.81, p < .001$, partial eta squared = .20, and dismissive attachment, $F(3, 112) = 2.94, p = .036$, partial eta squared = .07.

A post hoc multiple regression analysis was conducted to further examine the relationship between hardiness level, attachment style, and burnout scores. Multiple regression helps to determine the overall fit (variance explained) of the model and the relative contribution of each of the predictors to the total variance.

Attachment styles were previously determined by plotting continuous scores for attachment-related anxiety and attachment-related avoidance onto a four-quadrant map, as discussed earlier. Attachment can also be examined using the raw, continuous scores (rather than plotting the scores) for attachment-related anxiety and attachment-related avoidance, using basic correlational methods, such as regression. Hardiness scores are continuous, with scores indicative of level of hardiness. Burnout scores are also continuous. As such, post-hoc tests were done on this sample of nurses to determine a better understanding of how attachment style and hardiness impact burnout scores for nurses.

Multiple regression was used to examine the independent variables of total hardiness score, attachment-related anxiety score, and attachment-related avoidance score to the dependent variable of burnout score in licensed professional nurses.

Testing assumptions of multiple regression, the Durbin-Watson statistic of 1.87 indicated an independence of errors (residuals) between predictors of total hardiness, anxiety scores, and avoidance scores for the dependent variable of burnout score. Homoscedasticity assumption was met as assessed by visual inspection of a plot of studentized residuals versus unstandardized predicted values. Multicollinearity assumption was met in that none of the independent variables had correlations greater than 0.7. In addition, tolerance scores in collinearity statistics results were all greater than 0.1. No outliers were found using an examination of studentized deleted residuals. No residuals were found greater than + or – 3 standard deviations. No problematic high leverage points were found during an examination of the leverage residuals. No Cooks Distance values above 1 were found, therefore no cases were influential. An examination of the histogram of the standardized residuals showed that the residuals appear to be approximately distributed. To confirm normal distribution, the P-P plot was also examined. No violations of normality were found.

One of the objectives of multiple regression is to determine the portion of the variation in the dependent variable that can be explained by the independent variables. An R score of .70 indicates that the strength of the linear association between the variables is moderate to strong. The coefficient of determination, R^2 , for the overall model was 49% with an adjusted R^2 of 47.8%, which is a medium to large effect size. Total hardiness, attachment-related anxiety scores, and attachment-related avoidance scores statistically significantly predicted burnout scores, $F(3, 124) = 39.71, p < .001$.

The slope coefficient for anxiety was not statistically significant, confidence interval (-.04 to .29), $p = .14$. However, the slope coefficients for avoidance and total hardiness were both statistically significant, avoidance (confidence interval, .11 to .48, $p = .002$); total hardiness (confidence interval, -.14 to -.07, $p < .001$). Every increase of one in avoidance score is associated with an increase of .30 in burnout score. Every increase of one in hardiness score is associated with a decrease in burnout score of -.11. Results from the multiple regression are shown in Table 7 below.

Table 7

Multiple Regression Coefficients for Burnout Score

Model	<i>B</i>	<i>SE B</i>	<i>t</i>	Sig.
Constant	5.71	.66	8.63	.000*
Anxiety	.13	.08	1.47	.143
Avoidance	.30	.09	3.20	.002*
Total hardiness	-.11	.02	-5.97	.000*

* $p < .05$

Summary

The purpose of this study was to discover whether a relationship between adult attachment style, hardiness, and burnout symptoms exists in a sample of licensed professional nurses. The participants were obtained by snowball sampling using SurveyMonkey and Facebook, yielding 128 valid surveys. The data were analyzed using SPSS Version 21. Analysis of variance was used to answer research questions one and three; a Kuskal-Wallis H test was conducted for Research Question 2. A post-hoc regression analysis was also conducted on total hardiness score, attachment-related

anxiety score, and attachment-related avoidance score to total burnout score in the sample of nurses.

Research Question 1 asked whether a relationship exists between adult attachment style (secure, fearful, preoccupied, and dismissive) and total hardiness among licensed professional nurses. The data analysis from this study revealed a significant relationship between adult attachment style and hardiness level, with secure attachment style having the highest level of total hardiness. The three insecure attachment styles (preoccupied, fearful, and dismissive) had similar hardiness scores and all insecure attachment styles were significantly lower than those in the secure attachment category. The null hypothesis was rejected.

Research Question 2 asked if there is a relationship between adult attachment style (secure, fearful, preoccupied, or dismissive) and individual scores for each of the facet components of hardiness (commitment, control, and challenge) in licensed professional nurses. Findings from the statistical analysis revealed that scores for control and challenge were not significantly different for each of the four attachment styles. However, scores for commitment were significantly different for secure attachment as compared to fearful attachment ($p = .002$) and also for secure attachment as compared to dismissive attachment ($p = .039$). The null hypothesis for research question two was also rejected.

Research Question 3 asked if there is an interaction effect between adult attachment style and hardiness level on the burnout score in licensed professional nurses. For this sample, no significant interaction was found between attachment style and

hardiness level on burnout score. However, a post hoc multiple regression analysis further examined the continuous scores for attachment-related anxiety, attachment related avoidance, and total hardiness to see if there was a relationship between these three independent variables on the continuous dependent variable of total burnout scores for the nurses in the sample. A multiple regression analysis indicated that total hardiness, attachment-related anxiety scores, and attachment-related avoidance scores all predicted burnout scores in the sample of nurses, with statistical significance. The slope for attachment-related anxiety scores was not statistically significant. However, the slopes for attachment-related avoidance and total hardiness were statistically significant. For each increase of one in attachment-related avoidance score, there was an increase of 0.29 in total burnout score. In addition, for each increase of one in total hardiness score, there was a decrease (-.11) in total burnout score.

Additional discussion of the study findings and implications for future research can be found in Chapter 5.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this quantitative study, which was inspired by the current and pressing nursing shortage crisis, was to examine the relationship between adult attachment style, hardiness, and burnout in licensed professional nurses. Secure attachment style and hardiness are both considered protective factors against burnout, but no studies have been conducted that examined these two protections, together, in relation to burnout in licensed professional nurses.

The first research question examined the relationship between attachment style and hardiness, using the Experiences in Relationships, Revised (ECR-R) and the Dispositional Resilience Scale, Revised (DRS-15), respectively. Securely attached nurses were found to have higher scores in total hardiness than nurses in any of the other three insecure attachment styles. The second research question used the same instruments to examine the relationship between attachment style and the three individual facets of hardiness (commitment, control, and challenge). Results found the hardiness facet of commitment scores varied significantly between securely attached and fearfully attached nurses, and also between securely attached and dismissively attached nurses. The third research question considered hardiness and attachment style, together, in relation to total burnout scores, which were measured using the Burnout Measure, Short Version. An interaction between hardiness and attachment style was not found. However, both hardiness and attachment style significantly impacted burnout scores in the sample of nurses. A multiple regression analysis found total hardiness, attachment-related anxiety

scores, and attachment-related avoidance scores all predicted burnout, with statistical significance ($p > .001$). The slope coefficient for attachment-related anxiety was not found to be statistically significant, though both attachment-related avoidance and total hardiness score slopes were significant. For every increase of one in avoidance score, there was an associated increase of .30 in burnout score. For every increase of one in hardiness score, there was a decrease of .11 in burnout score.

Interpretation of the Findings

This study aimed to build upon previous research in the literature, which was presented and discussed in Chapter 2. The research discussed in Chapter 2 indicated that hardiness has a long history of providing protection against stress and burnout (Van Servellen et al., 1994; Garrosa et al., 2008; Queiros et al., 2013) for nurses and other populations. The results of this study indicated that nurses with very low hardiness had the highest burnout mean scores ($n = 6, M = 5.52$), while low hardiness showed some improvement in burnout mean score ($n = 24, M = 4.38$). Both scores indicated that burnout symptoms were present. Average hardiness was associated with low mean burnout scores ($n = 64, M = 3.49$). Mean burnout scores for high hardiness ($n = 23, M = 2.72$) and very high hardiness ($n = 11, M = 2.34$) were low for this sample of nurses. As such, it appears that having even an average amount of hardiness will serve as protection against burnout for licensed professional nurses, consistent with the literature.

This study found nurses with a secure attachment style had significantly higher hardiness scores compared to nurses in the three insecure attachment styles (preoccupied, fearful, or dismissive). This finding is consistent with prior research involving other

populations (Escolas et al., 2014; Neria et al., 2014; West, 2015) and adds to the idea that secure attachment may somehow aid in the development of hardiness (Neria et al., 2014). Interestingly, the nurses in this study who were in the very high hardiness category (with the highest hardiness scores, $n = 11$) were only securely attached. Participants in the very low hardiness category (the lowest hardiness scores) contained participants in all four of the attachment styles. Finally, Escolas and others (2014) found a significant difference in total hardiness between fearful ($M = 26.38$, $SD = 5.51$) and dismissive ($M = 28.13$, $SD = 6.16$). The present study found no such significant differences in total hardiness between the three insecure attachment styles.

The hardiness facets of control and challenge were not significantly different among the attachment styles in this study of licensed professional nurses. However, the hardiness facet of commitment was significantly different between secure versus fearful attachment and also between secure versus dismissive attachment. Escolas and others (2014) also found significant differences in commitment level between secure versus fearful and secure versus dismissing attachment styles in active duty military personnel. Fearful attachment and dismissive attachment are both defined as having high scores in attachment-related avoidance, which may provide a key to understanding these differences in hardiness facets. Commitment is defined as feeling committed (Kobasa, 1979), which may prove difficult to those with high scores in attachment-related avoidance.

Prior research found that hardiness and attachment style may work together to reduce vulnerability to PTSD in ex-military populations (Zakin et al., 2003). The present

study examined hardiness and attachment style, together, to see if there was an interaction on the outcome of burnout scores in nurses. The expected interaction between the variables of hardiness and attachment style was not found. However, each construct did independently and significantly impact total burnout scores in this sample of nurses, which is largely consistent with the literature for other populations. Prior research on attachment style found that adult attachment style plays a role in certain important outcomes, such as mood states in active duty military personnel (Escolas et al., 2014). Attachment style was also found to be correlated with burnout (Malach-Pines, 2004), with secure attachment being associated with lower burnout scores (West, 2015). Secure attachment style has also shown to be associated with hardiness in young adult Israeli Defense Forces (Neria et al., 2014). This present study found that hardiness level and attachment style were both associated with burnout scores for licensed professional nurses. The results from the post hoc multiple regression analysis indicated that the attachment component of avoidance (but not anxiety), as well as total hardiness score, both significantly correlate with burnout scores. Burnout scores were highest in those nurses who had fearful ($n = 8$, $M = 4.93$) or dismissive attachment styles ($n = 13$, $M = 4.81$), which are defined as having high scores in attachment-related avoidance. Burnout scores were lowest for those who had higher hardiness scores or were securely attached (low anxiety, low avoidance).

Intervention efforts aimed at increasing hardiness as a protection against burnout for nurses should continue. However, intervention efforts would benefit from the incorporation of attachment theory into those efforts against burnout. In particular, secure

attachment is a protection against burnout. Having high scores in attachment-related avoidance (fearful and dismissive attachment) was found to be associated with high rates of burnout in nurses. These two insecure attachment styles were also found to differ significantly from secure attachment in the hardiness facet of commitment scores.

Limitations of the Study

One of the limitations of this study is the use of self-report surveys to collect the data for this research. Self-report measures are widely used in research due to being affordable and self-report measures are generally considered consistent. Self-report measures assume that participants will answer survey questions honestly. However, some of the questions pertaining to romantic partners on the ECR-R may have proven somewhat difficult for the study participants, especially if the participant was not currently in a romantic relationship. In such cases, the participant would need to rely on memories from past relationships, which may not be currently accurate or accurate for their next relationship (especially if the past relationship ended badly).

Another limitation to this study is the use of snowball sampling to target a sample of nurses using SurveyMonkey. Although snowball sampling is a valid method of obtaining research data, it may not have provided a sample that is representative of the larger population. For example, men were under-represented in this study, which might have been due to non-response bias or the sampling method. In addition, 75% of the nurses in the study sample were found to be securely attached. This left only 25% as being in the three insecure groups combined. Future research may want to replicate this

study to determine if nurses are generally more securely attached, or if this sample was biased by the sampling method, or some other factor.

The instruments chosen for this research were assumed to measure the constructs named in this research. Additional research may seek to use different instruments to measure the constructs of hardiness, burnout, and attachment style to address construct validity. In terms of external validity, this research was aimed at licensed professional nurses in the United States and cannot be generalized to other populations, geographic areas, or other types of healthcare workers.

Recommendations

A secure attachment style has consistently proven itself as an important component of successful functioning in general. Future research may want to continue to examine the implications of the relationship between adult attachment styles and burnout via the study of the “antecedents, correlates and consequences of burnout” in people with different attachment styles in various occupations and positions with organizations, as suggested by Malach-Pines (2004, p. 78). Additional research is needed to “flesh out” the relationships between the variables and to see if there are other variables that are influencing, or confounding, the relationships. In addition, future research may want to more closely examine attachment-related avoidance, in particular, relative to the development of burnout in licensed professional nurses and other populations. A focus on attachment-related avoidance for future research may lead to the development of strategic burnout prevention interventions for nurses.

Future research may also want to replicate this study in other specific populations, such as other high-stress career fields, or perhaps with specific demographic groups (i.e. specific age group, type of nurse, or ethnicity), particularly the groups that have not been adequately represented (i.e. male nurses). Future research may also want to focus specifically on additional examination of attachment style and perhaps methods for reducing attachment-related avoidance as a protection against burnout. A closer examination of the facet components of hardiness in various career fields might aid in the understanding of the importance of these facets (and differences in facets) in those specific career fields. Future research may want to examine attachment style and burnout using qualitative methods to deepen our understanding of the relationship between adult attachment style, hardiness, and the symptoms of burnout. Finally, future research may want to examine all of these factors longitudinally.

The development of alternate methods for addressing attachment in healthcare would be helpful in supporting nurses and others in this field. An examination of individual attachment style through current testing methods that employ questions like those on the ECR-R may initially cause nurses to feel somewhat defensive or even ashamed, particularly if the test results indicate they have an insecure attachment style. Finally, the creation of methods for generally improving attachment-related anxiety and attachment-related avoidance scores would likely be helpful in supporting nurses and others in high-burnout career fields.

Research done by Johnstone and Feeney (2015) found that individual differences in attachment security played a role in the perception and appraisal of a threat as well as

the coping response to stress in the workplace. To foster a sense of support for workers, the authors recommended adjusting attention to attachment related components of the personality. Highly avoidant individuals may initially be reluctant to accept support, for example (Johnstone & Feeney, 2015). Use of the notion of supervisors providing a secure base for employees of an assisted living center (Simmons et al., 2009) might be useful for nurse managers and hospital administrators in supporting nurses toward burnout prevention and personal growth. Efforts made to support nurses toward personal growth and the prevention of burnout also serve as efforts to promote positive social change in the healthcare field.

Implications

The results of this research have important implications for positive social change for nurses and the healthcare field as a whole. Nurses are vital to the healthcare field. Efforts to develop intervention strategies to more effectively prevent burnout will help to ensure that there nurses stay in their jobs and are available to provide first line care for healthcare patients.

This study further illustrates the need to better understand attachment-related behavior when designing and implementing education programs, stress-management interventions, and burnout prevention interventions (Adshead, 2010) for nurses. If nurse educators are informed about attachment patterns, and understand that “everybody has one,” perhaps a student support focused teaching style (providing a secure base) could be implemented to assist in prevention of attrition from nursing educational programs. Furthermore, if hospital administrators and healthcare personnel are also educated on

attachment styles and attachment-related behaviors, including how to provide support for the different attachment styles, perhaps intervention efforts might become more effective at preventing burnout, thereby also more effective at keeping the much needed nurses in the field. If nurses are aware of their own attachment styles, as well as how it may affect their relationships with coworkers and patients, perhaps it would enable those nurses to seek assistance and/or education toward developing a more secure attachment style, while also understanding that not all people are securely attached.

Conclusion

This study was developed as an effort to better understand resistance to stress and burnout in nurses in an effort to help mitigate the nursing shortage crisis. An extensive literature review revealed research on stress in nursing that pointed toward a closer inspection of the personal factors of individual nurses as possible sources for intervention strategies against the development of burnout. Personality hardiness is considered a part of a person's "wiring" and has long been known to serve as a protective factor against stress and the development of burnout. Attachment style is also a personal factor of each individual nurse. This is the first study, to my knowledge, that examined both hardiness and adult attachment style to the development of burnout in nurses. Significant relationships were found between the independent variable of hardiness and the independent variable of adult attachment style to the dependent variable of burnout in licensed professional nurses, though an interaction between the independent variables to burnout was not found.

Attachment theory explains that attachment behaviors are activated during times of stress. Nursing is a high-stress career field. The attachment patterns developed in early life are known to serve as the framework for behaviors, and coping skills related to stress, throughout the lifetime. A hardy personality helps a person to cope more effectively with stress as well. The results of this study support previous research that secure attachment and personality hardiness both protect against stress—and, in this case, also protect against the development of burnout in licensed professional nurses. This information may be useful to future research examining the impact of attachment styles, especially with regard to burnout prevention programs.

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Appendix A: Demographic Questionnaire

Are you, or do you identify as, male or female?

- A. Male
- B. Female

Which is your age range?

- A. Younger than 18
- B. 18-29
- C. 30-39
- D. 40-49
- E. 50-59
- F. 60-64
- G. 65 or older

Which race do you identify as?

- A. Black
- B. American Indian or Alaska Native
- C. Asian
- D. Hispanic
- E. Multiple Races
- F. Native Hawaiian or Pacific Islander
- G. White
- H. Other: (please specify) _____

What title best describes your position?

- A. Registered Nurse
- B. Licensed Practical Nurse
- C. Other licensed nurse (please specify): _____
- D. Certified Nursing Assistant
- E. Nursing Assistant
- F. Home Health Aid

Where do you do most of your work?

- A. Hospital
- B. Clinic or health agency
- C. Doctor's office
- D. School/College as a nurse
- E. School/College as an instructor
- F. Traveling nurse

How many years have you been employed as a nurse?

_____ years.