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Critical Care Nurse Personality and Methods of Coping After a Critical Incident

Sandra Huggins

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CRITICAL CARE NURSE PERSONALITY AND
METHODS OF COPING AFTER A CRITICAL INCIDENT

SANDRA HUGGINS

CRITICAL CARE NURSE PERSONALITY AND
METHODS OF COPING AFTER A CRITICAL INCIDENT

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Abstract

Critical care nurses frequently experience traumatic events that are physically and emotionally overwhelming. Examples of these situations include failed cardiopulmonary resuscitation (CPR) attempts, physical and verbal attacks from volatile patients and their families, and caring for victims of horrific motor vehicle accidents and national disasters. Such events are termed *critical incidents* (Mitchell, 2006). Critical incidents are commonly viewed as a difficult but realistic part of working in intensive care units, emergency departments, and other critical care areas.

The demands of immediacy and vigilance in critical care settings do not create a conducive environment for nurses to address their own thoughts and feelings after a critical stressor. Critical care nurses often must rebound quickly from one unsettling event only to immediately encounter other exhaustive, stressful situations. They are repeatedly left to deal with their personal emotions, thoughts, and reflections of critical incidents without structured support or guidance. Many nurses develop *critical incident stress* with ineffective coping patterns that impair their critical thinking ability, performance, and overall well-being (Mitchell, 2006). If left unresolved, critical incident stress contributes to an increase in medication and treatment errors (Blacklock, 1998; Dugan et al, 1996; Harvey, 2006; Hays, Mannahan, Cuaderes, & Wallace, 2006), absenteeism and stress disability claims that will cost the health care industry a projected $150 billion over the next twenty years (Caine & Bagdasarian, 2003), and nursing workforce attrition because of unresolved stress, lack of support, and unhealthy work

environments (Espeland, 2006: Goodin, 2003; Papathanassoglou, 2006; Pendry, 2007).

New and innovative methods of stress reduction are needed in order to facilitate coping and actively support critical care nurses who are exposed to critical incidents. One novel approach is to identify the unique personality traits of critical care nurses along with preferred, individualized coping methods. Specific stress-reduction strategies could be implemented by hospital administrators and managers as a means of nurturing effective coping and actively supporting nurses, thus improving working environments and preventing continually high turnover rates in critical care settings. Therefore, future research should focus on distinguishing critical incident stress interventions that are best suited for each personality.

This descriptive correlational study identified five distinct personality traits that commonly exist in critical care nurses. Preferred stress reduction interventions that are considered therapeutic for alleviating critical incident stress were established. Research findings indicate personality traits unique to critical care nurses do indeed exist and that critical care nurses rely heavily on specific coping patterns to relieve stress. Other relevant findings suggest that an underlying correlation exists between specific personality traits and methods of stress reduction following a critical incident. The researcher offers insight into critical incident stress intervention ideas that focus on the unique needs of nurses.

Chapter 1

The Research Problem

Introduction

On a daily basis, nurses are exposed to a variety of stressful situations while practicing in critical care settings (Bledsoe & Barnes, 1999; Hays et al, 2006). Some of these daily occupational stressors include pharmacy delivery and lab value reporting delays, unmet staffing needs, interdepartmental demands, and the challenges of meeting physician, patient, and family expectations. Critical care nurses are repeatedly bombarded with auditory stimulation from alarming monitoring devices, mechanical ventilation equipment, and infusion devices. Endless phone calls from families, physicians, and ancillary departments disrupt care for their patients (Harvey, 2006; Hays et al, 2006; Remer, 2004). Intuitive recognition of acute changes in a patient's status demands vigilance. Life-supporting technological advances require critical care nurses to acquire an extensive knowledge base and maintain the ability to make split second decisions (Cronquist, Lutzen, & Nystrom, 2006; Hays et al, 2006; Papathanassoglou, 2006).

Over time, critical care nurses generally adapt to these stressors through innate coping mechanisms (Huether & McCance, 2004). However, when an abrupt, unexpected, adverse event, or critical incident, occurs in addition to these daily stressors, critical care nurses find themselves at times physically, emotionally, and psychologically overwhelmed. Stressful events that can be termed critical incidents include unexpected cardiopulmonary arrest, unsuccessful cardiopulmonary resuscitation (CPR), verbal abuse and/or physical trauma sustained from a combative patient or family member, natural and manmade disasters, child abuse, traumatic death, heated ethical dilemmas, family

grieving, and needless exposure to infectious diseases (Harvey, 2006; Laws, 2001; Lenart, Bauer, Brighton, Johnson, & Stringer, 1998; Morrissey, 2005).

Critical incident stress describes the acute physical and emotional inability to adaptively respond to these stressful events (Harvey, 2006). A variety of critical incident stress reactions, ranging from mild to severe, have been documented as the result of critical incidents (Morrissette, 2004). Critical care nurses frequently endure several critical incidents within a short timeline, creating a negative cumulative effect on feelings and emotions (Blacklock, 1998; Laws, 2001). Without effective stress reduction and coping, this sequelae of events can lead to ineffective coping, reduced productivity, increased medical errors, chronic illness, absenteeism, disability, job dissatisfaction, and attrition (Bannon, 2005; Blacklock, 1998; Caine & Ter-Bagdasarian, 2003; Espeland, 2006; Harvey, 2006; Hays et al, 2006; Smith et al, 2001). Effective mechanisms should be established to offer stability and promote stress reduction following these potentially harmful events. However, some method of accurately and effectively identifying those nurses at risk for developing critical incident stress must first be established.

Research Problem

There is a significant body of research addressing various types of critical incident situations encountered by emergency medical service (EMS) personnel and emergency room nurses (Bledsoe & Barnes, 1999; Caine & Ter-Bagdasarian, 2003; Cronquist et al, 2006; Dugan et al, 1996; Hays et al, 2006; Laws, 2001; Morrissey, 2005; O'Connor & Jeavons, 2003). However, this phenomenon has been investigated to a lesser extent in critical care nurses specifically. In addition, there is limited research investigating new, innovative methods of critical incident stress intervention that can be implemented to

reduce the immediate effect of these stressors. Unfortunately, stress reduction methods involving peer and support groups, guided reflection, reflective journaling, and other established interventions have been examined in limited capacity. Most of the current research focuses heavily on critical incident stress debriefing. Recently, this method has been heavily scrutinized and marked by mixed reviews as to its efficacy (Bisson, 2003; Bledsoe & Barnes, 1999; Craft, 2005; Cronquist et al, 2006; Devilly, Gist, & Cotton, 2006; Elliot, 2004; Everly & Mitchell, 2000; Groves, 2005; Ihlenfeld, 2004; Keatley, 1998; McClelland, 2006; Macnab, Sun, & Lowe, 2003).

Nurse attrition remains high in critical care settings despite efforts to establish therapeutic coping interventions. The average yearly turnover rate is currently 21% in critical care nursing. The average cost of replacing one critical care nurse can reach $145,000 (Alspach, 2007). Because the field of critical care nursing encompasses such a diverse, highly-trained group of individuals, effective methods of determining which interventions nurture effective coping and resilience are needed to provide guidance for supportive measures. There is limited research investigating the various personality types of critical care nurses and their associated methods of coping with critical incident stress. Critical care nurses, nurse managers, and health care administrators desperately need a more focused, tailored approach to combating critical incident stress.

Purpose of the Study

The purpose of this descriptive study was to identify the personality traits of critical care nurses and distinguish coping methods and interventions they consider therapeutic for resolving critical incident stress. The findings of this study will establish a foundation for future nursing research and offer guidance for identifying those nurses at

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risk for ineffective coping as well as introduce a structured approach in establishing the unique needs of critical care nurses in resolving critical incident stress.

Research Question

The research question addressed in this study was: "What relationship exists between critical care nurse personality and the preferred methods of coping after encountering a critical incident?"

Theoretical Framework

The framework considered most supportive of this study is the General Adaptation Syndrome model developed by Selye (1950). Selye's principle concepts have served as the foundation for modern stress research. Selye determined that there are innate mechanisms within the body that provide defense against numerous conditions perceived as stressors. He revealed that there is a triad of successive responses, called the general adaptation syndrome, produced when the body encounters a stressful event. These three reactionary stages include (1) the alarm stage or "fight-or-flight response" in which the central nervous system and pituitary gland are stimulated, (2) the resistance or adaptation stage in which the adrenal hormones are released, and (3) the stage of exhaustion in which unresolved stress leads to the subsequent failure of adaptive responses and homeostasis, allowing the onset of illness and disease (Huether & McCance, 2004).

The fundamental process sustaining the human body through intense, stressful events is the fight-or-flight response. A fundamental reaction within this phenomenon is termed *mental mobilization.* Dyregrov, Solomon, and Bassoe (2000) described mental mobilization as an innate, systematic response elicited by the human body when faced

with a critical incident. Characteristics of mental mobilization include increased sensory perception, awareness, rapid processing of stimuli and pertinent memories, deactivation of emotions, and altered perception of space and time.

Critical incident reactions are induced without conscious appraisal of periphery to enable faster, more efficient survival mechanisms. However, retrospective perception of these reactions occurs in a much broader, analytical context. This "out of body" phenomenon serves as a method of appraising one's performance after the critical incident has dissipated. Unfortunately, the individual experiences retrospective reflection of broader outcomes related to the event and can create intrusive memories (Dyregrov et al, 2000). This may happen hours to days after the initial event and are considered the "aftershock" of the event.

Modern research has expanded on Selye's principles to reveal that emotional, social, and psychological stressors produce the same neuroendocrine responses as physiological stress (Huether &McCance, 2004; Monahan, Sands, Neighbors, Marek, & Green, 2007). These mechanisms provide a means of resilience and survival during stressful situations. However, over time these protective mechanisms become exhausted in certain individuals, resulting in a breakdown in effective coping and immune modulation (Devilly, Gist, & Cotton, 2006; Monahan et al, 2007).

When applying Selye's principles of the General Adaptation model to the research question, one could propose that critical care nurses experience a heightened adaptive response and resilience when dealing with daily generic stressors. However, a critical incident can exhaust previously adaptive coping, causing disharmony, illness, and distress. If appropriate intervention is initiated shortly after a critical incident, then

effective coping can be facilitated and the nurse will remain in the resistance stage of adaptation. In contrast, if therapeutic intervention is not initiated following a critical incident, the critical care nurse experiences insurmountable responses to critical incident stress, resulting in instability and ineffective coping (Everly, 2003). With the knowledge that perceived stressors and adaptive responses are highly individualized, it is imperative that nursing research correlate effective coping styles to individual personality traits so specific interventions can be developed in supporting each individual through this period of unrelenting stress (Devilly, Gist, & Cotton, 2006; Huether & McCance, 2004; Monahan et al, 2007).

Conceptual Definitions

Critical care nurse

In order to understand the unique challenges of critical care nursing, it is important to understand the defining qualities of the critical care nurse. As defined by the American Academy of Critical Care Nurses (AACN), the critical care nurse is a licensed professional nurse specializing specifically in the care of highly vulnerable, unstable, and complex patients. Their scope of practice includes complex, detailed assessment and highly-intense therapy and intervention. Critical care nurses possess their own specialized body of knowledge, skill sets, and credentialing governance in order to promote and maintain patient healing, caring, and advocacy (AACN, 2006).

Primary areas of employment include intensive care units, cardiac catheterization labs, progressive care units, emergency and acute care departments, and post-anesthesia recovery areas. Values fundamental to critical care nursing include respecting the patient's values, beliefs and right to informed consent, intervening when the patient's best

interests are in question, interceding for the patient in situations that require immediate attention, safeguarding the patient's quality of life, and serving as an intermediary between the patient, family, and other health care professionals. Critical care nurses practice as educators, clinicians, researchers, managers, clinical specialists, and nurse practitioners. Educational level ranges from associate to doctoral degrees in nursing. The clinical nurse specialist and acute care nurse practitioner are the most specialized professionals in this field. The critical care registered nurse (CCRN) certification is not currently mandated but is highly regarded in the health care profession (AACN, 2006).

Personality

Personality describes the distinct traits, characteristics, and behaviors that are considered exclusive to an individual and that observers identify and determine as qualities that are unique to the individual (*Taber's Cyclopedic Medical Dictionary,* 2005). This attribute has been described as one of the most abstract concepts defining individuality. Saucier and Goldberg (2003) define personality as "an individual's characteristic pattern of thought, emotion, and behavior driven by psychological mechanisms." Personality is a core feature of the individual that remains consistent across time.

Modern personality researchers have resorted to clustering personality traits into five categories of personality dimension. The Big Five Factor Structure has been considered the most influential personality construct of this century and has been frequently referenced by current researchers and theorists. These five distinct dimensions of personality are defined as extraversion, agreeableness, conscientiousness, neuroticism (conversely termed emotional stability by many authors), and intellectual openness to

experience. Each individual may possess measurable attributes of each of the five personalities but often projects one distinct trait that is readily identified (Saucier & Goldberg, 2003; Gosling, Rentfrow, & Swann, 2003).

Extraversion is characteristic of sociability, assertiveness, motivation, sensitivity to reward and recognition, and optimism. Conscientiousness describes persistence, sensitivity to accomplishment and achievement, self-discipline, concentration, and attention to detail. Neuroticism reflects reactionary, emotional instability, self-consciousness, defiance and avoidance. Agreeableness encompasses trust, altruism, compliance, loyalty, supportiveness, and selflessness. Intellectual openness describes creativeness, curiosity, flexibility, abstract imagination, acceptance, and problem-solving (Conner-Smith & Flachsbart, 2007).

Coping

Coping is defined as adaptation in response to unexpected change or stress that enables an individual to meet life's demands in order to remain healthy. Coping can be described as either an effective (adaptive) or ineffective (maladaptive) behavior (*Taber's Cyclopedic Medical Dictionary,* 2005). Lazarus and Folkman (1984) describe coping as the cognitive and behavioral actions an individual exhibits when managing external and/or internal demands perceived as stressful or taxing. Purposeful coping generally does not attempt to master the stressor but rather develop tolerance through minimizing, accepting or ignoring the stressor. Lazarus and Folkman developed their coping model through concepts originally described by Selye and categorized adaptation as problem-focused and emotion-focused coping.

Problem-focused coping, sometimes referred to as personal hardiness, is utilized when an individual actively identifies a current stressor and initiates problem-solving actions to manipulate the stressor. The individual may perceive the stressor as motivationally challenging and stimulating. This form of coping is most productive when the individual considers the stressor modifiable or controllable. Emotion-focused coping is further categorized into problem-reappraisal and avoidance. Problem-reappraisal is an *attempt to reduce symptoms and foster adjustment when encountering an uncontrollable* stressor. This form of coping distinctly modulates adaptation and promotes resilience. The key concept many theorists associate with problem-reappraisal is that individuals depend upon specific types of coping in relation to their "goodness of fit" with the type of stressor currently faced (Bowman & Stern, 1995). This suggests that individuals have distinct collections of coping interventions they actively engage when encountering specific forms of stress.

Conversely, an individual who perceives a stressor as uncontrollable may refuse to acknowledge the stressor at that point in time. Avoidant coping has been identified during extreme adversity and represents emotional detachment or dissociation. He argues that these individuals are resilient by their own methods and display effective coping over a steady trajectory. On the other hand, this form of coping is ineffective and harmful if the individual never truly acknowledges an apparent stressor and often promotes maladaptive coping, rumination, and progressive psychopathology over time (Bonanno, 2004).

Critical incident

A critical incident is defined as any event that causes unusually strong reactions that may interfere with an individual's ability to function and cope. The impact of this event surpasses the usual range of experiential distress and challenges reliable coping patterns. Distress created by this challenge can potentially create a crisis situation and overwhelm the individual. Emergencies, disasters, and trauma are just a few events that can be termed critical incidents (Everly, 2003). Stressful situations of this nature specific to critical care nursing include failed or traumatic resuscitation, ethical dilemmas regarding patient care, harmful threats from patients and family members, staff altercations, degrading actions from physicians and other health care professionals, and harmful or life-threatening occupational exposures (Caine & Ter-Bagdasarian, 2003).

There are several distinct transitional phases during which individuals display various responses following a critical incident. Initially, a critical incident evokes alarm or a "fight-or-flight" response. Mental mobilization with emotional detachment occurs as an acute survival mechanism. An "aftershock" occurs within hours to days after the initial critical incident when reality becomes apparent. During this time, the individual may experience denial, euphoria or a "rush", or preoccupation. Reality becomes apparent and the individual begins to realize the experiences and outcomes of the event. This is often described as a "let-down" phase and the individual experiences the emotional impact of the event (Kwiatkowski, 2005).

Individuals often experience emotional anguish and distress while struggling with recollection of the event. This is the period in which innate coping mechanisms are utilized and the individual begins to evaluate and understand the event, subsequent

effects and reactions created by the event, and the impact of the event on the individual (Everly, 2006; Kwiatkowski, 2005). When individuals demonstrate resilience and utilize effective means of coping, they experience acceptance and understanding of the event and rebound from its emotional and psychological effects. The individual returns to pre-incident levels of functioning. However, some individuals who are unable to effectively cope with the realities of the event experience symptoms of critical incident stress. Inability to cope subsequently leads to loss of control, significant distress, and impairment resulting in psychological crisis (Everly & Mitchell, 2000).

Critical incident stress

Critical incident stress refers to the distress created in response to intense, overwhelming circumstances. It is often related to a significant amount of acute distress, impairment, or dysfunction and this is considered a natural, healthy response. Most individuals utilize some level of defense, either by resistance or resilience, to maintain holistic health. It has been estimated that fewer than 10% of exposed individuals develop true pathological effects from a single episode. However, the cumulative effect of multiple episodes can be just as devastating as one single event and exhaust the physical, emotional, and psychosocial health of affected individuals leading to significant impairment and distress, or psychological crisis (Everly, 2006).

Critical care nurses report levels of job dissatisfaction four times greater than any other United States worker (Espeland, 2006). Specific reasons for this inequality may stem from the distress created by being unable to save and preserve life and reduce human suffering (Blacklock, 1998) and death, dying, and aggressive care provided for patients who will not benefit from the treatment (Brosche, 2007). Very few industries

outside of the health care realm expose employees to this sort of turmoil. This is of primary concern in critical care nursing and motivation for this research study.

There are five major types of stress reactions: (1) cognitive, (2) physical, (3) emotional, (4) behavioral, and (5) spiritual. Each reaction has a broad range of signs and symptoms an individual may display following a critical incident (Appendix A).

Operational Definitions

Personality

In recent years, researchers have used multiple variations of Big Five/Five-Factor Model questionnaires to assess personality traits in individuals. Saucier's Mini-Markers questionnaire is a 40-item adjective measure of the Big Five personality domains. This instrument was adapted from Goldberg's International Personality Item Pool. The internal consistency of the Mini-Markers survey in evaluating the Big Five personality dimensions was established by Saucier (1994). The alpha coefficients reported for each of the five dimensions were extraversion (.85), agreeableness (.85), conscientiousness (.86), neuroticism (.76), and openness (.78). Human traits are individually ranked using a 9-point Likert scale with scores ranging from 1 (extremely inaccurate) to 9 (extremely accurate). Specific traits are assigned to each of the Big Five domains. Ranked responses are tallied, and the domain with the highest score is considered the dominant personality of that individual.

Methods of coping

Numerous published tools attempt to accurately measure perceived stress levels and effectiveness of coping. However, no specific instrument has been developed that exclusively identifies nurse coping patterns involving critical incident stress. Therefore,

the researcher has developed a 36-item inventory, titled Preferred Methods of Stress Reduction, which identifies preferred interventions and practices used as coping mechanisms after encountering a critical incident. The interventions are ranked using a 5-point Likert scale ranging from 1 (never use) to 5 (always use). The research tool requires individual retrospective examination of previous coping patterns.

Assumptions

This study is based upon certain assumptions about critical care nurses and their practice. It is assumed that critical care nurses experience stress within the critical care setting that cannot be avoided. It is assumed that certain events within this setting can be perceived as critical incidents and that critical care nurses have the ability to recognize these events accordingly. It is also assumed that critical incidents and critical incident stress are perceived as negative experiences. Lastly, it is assumed that critical care nurses possess the ability to verbalize clinical events which they perceive as critical incidents.

Significance of Study

Critical care nurses are faced with higher acuities and more intense situations as technological advances increase the probability of patient survival (Harvey, 2006) making it probable that exposure to critical incidents will increase. If left untreated, critical incident stress resulting from these events may result in irreversible physical, psychological, spiritual, cognitive and emotional impairment. Because critical care nurses have the potential of experiencing critical incident stress, it is imperative that nursing administrators and managers identify methods of supporting critical care nurses through these trying events. This research will then lay a foundation for future studies that explore

individual characteristics that expose nurses to critical incident stress, individual perceptions of these events, and personal ways of coping.

Summary

Critical care nurses are faced with challenges throughout their careers. They endure daily stressors that are considered to be a standard nuisance, such as delays in treatment, staffing shortages, higher patient acuities, interdepartmental struggles, increased sensory stimulation, and increased patient and family expectations, to which they become accustomed. The key threats to their stability are emotional, traumatizing events that may leave them bewildered, devastated, and unable to cope or function. Most facilities do not provide nurses the opportunity to alleviate the stress created from these critical incidents, so their pain and emotions are often repressed in order to resume caring for their patients.

Selye explains that stressors continually deplete the body of energy, defense, and adaptive coping mechanisms. Failure to alleviate these stressors will result in exhaustion, fatigue, illness, and ineffective coping. Critical care nurses are inevitably exposed to chronic stressors and learn to compensate for these stressors in order to function. However, encountering a critical incident can potentially move them into an exhausted state (Huether & McCance, 2004).

With the understanding that critical care nurses will inevitably experience critical incidents, it would benefit both nursing and the healthcare industry to identify nurses at risk and provide therapeutic, caring interventions after a critical incident has occurred. Reducing stress in the critical care setting could potentially thwart the high attrition of experienced, quality nurses (Caine & Ter-Bagdasarian, 2003). However, one generic

intervention is not always optimal because each individual's reaction is unique (Remer, 2004). Therefore, it is the purpose of this study to reveal appropriate interventions that critical care nurses feel meet their individual needs in order to overcome critical incident stress.

Chapter 2

Review of Literature

Introduction

This literature review explores the context of critical incident stress and

personality, as well as how these concepts affect critical care nurses. The databases

utilized were CINAHL and PsycINFO. Critical incident stress was examined first by

reviewing the basic elements of stress as they pertain to the General Adaptation

Syndrome proposed by Selye. Once this foundation was established, numerous articles

addressing critical incident stress were then reviewed. The literature review also includes

several articles pertaining to personality traits identified in registered nurses of various

backgrounds and methods of coping utilized. The research articles summarized within

this literature review were based on a variety of quantitative and qualitative methods of

inquiry.

Research studies are unavailable pertaining specifically to the personalities of

critical care nurses and stress intervention complimenting unique individual personalities.

However, numerous studies have documented the therapeutic effect of generic

interventions such as journaling, defusing, debriefing, and reflection in moderating

critical incident stress reactions after a traumatic event occurs. These studies

predominantly focus on emergency room personnel, EMS personnel, and critical care

nursing.

Personality Dominance

Gabram and colleagues (1994) performed a study identifying the prominent

personality types of flight crew members using the Myers-Briggs Type Indicator (MBTI).

Twenty-eight crew members participated: 14 flight nurses, 14 respiratory therapists, and 8 pilots. Interestingly, 13 of the nurses were female. The two most prominent personality types identified were extroversion, intuition, feeling, and perceiving (ENFP) in seven participants (20%) and extroversion, intuition, thinking, and perceiving (ENTP) in five of the participants (14%). When characteristics of the flight nurses were analyzed specifically, the most prominent personality type was ENFP.

Personalities were studied in 46 female emergency nurses using the Hogan-Champagne Preference Survey, an adaptation of the MBTI (Atkins & Piazza, 1987). Ten of the participants (22%) displayed introversion, sensing, feeling and judging (ISFJ) dominance. The second most common personality was reported as introversion, sensing, thinking, and judging (ISTJ). When each dimension was analyzed, most nurses exhibited introversion (63%), sensing (61%), feeling (65%), and judging (61%).

In comparing the results of the two studies, it is interesting to find such polarity between the two groups even though the two specialties are considered critical care nursing fields. However, the one prominent element between both groups reflects feeling (F). The feeling element of the MBTI generally depicts an individual who dislikes informing individuals of unpleasant circumstances. Feeling characteristics include consideration of others, relating well with others, sympathy, harmony, and efficiency (Myers & McCaulley, 1987).

Wright and Smith (1993) published a study comparing the personalities of American and Australian nurses. The researchers used the Edwards Personal Preference Schedule (EPPS) because the tool inhibits socially desirable responses. Mean personality scores of 384 female registered nurses from the United States demonstrated five

personality traits more prominently: Change (mean = 17.93, SD = 4.75), Intraception (mean = 16.37, SD = 4.16), Affiliation (mean = 16.27, SD = 3.87), Nurturance (mean = 16.08, SD = 4.24), and Abasement (mean = 16.08, SD = 4.94).

Personality and Coping in Nursing

Nurses traditionally are extremely caring individuals who focus entirely on meeting the expectations of their patients, colleagues, and employers. Because of this drive to meet these demands, nurses develop unrealistic expectations of themselves, leaving them susceptible to stress. In addition, nurses underreport stressful situations for fear of seeming inept at managing the challenges of nursing. As a result of this stigma, stressors accumulate until maladaptive coping mechanisms evolve. This is turn creates feelings of anxiety, depression, fatigue and exhaustion which ultimately lead to increased illness, absence from work, and attrition (Vere-Jones, 2006).

Boyle, Grap, Younger, and Thornby (1991) examined personality hardiness and ways of coping in 104 critical care nurses. Personality hardiness was positively related to social support ($r = 0.24$, $p = 0.006$). Sources of social support related to hardiness included nonwork-related support ($r = 0.19$, $p = 0.029$) and work-related support ($r = 0.24$, $p = 0.006$). Sixty-nine percent of the participants reported support from peers as the most common factor that assisted nurses in coping with stressful events.

A descriptive study conducted by Hays and colleagues (2006) investigated severe stressors encountered by intensive care unit (ICU) nurses and the types of coping they utilized. Participants consisted of 235 full-time registered nurses practicing in ICU settings at seven hospitals within a metropolitan city. The participants ranked 13 common stressors using a visual analog scale and completed the Lazarus and Folkman's Ways of

Coping Questionnaire. Half of the participants reported that staffing shortages were the most severe stressor encountered. Seeking social support (49.5%) and planned problem solving (59.2%) were reported as coping techniques most often utilized.

One study comparing distinct personality traits with burnout in ICU nurses was performed by Buhler and Land (2003). The researchers surveyed 117 ICU nurses using the Maslach Burnout Inventory and cited three distinct personality traits associated with certain aspects of burnout. Nurses exhibiting neurotic and extraverted traits displayed a positive correlation with emotional exhaustion and depersonalization. These factors are attributed to increased incidence of burnout in ICU nurses.

Similarly, Cross and Kelly (1984) compared the personality types of ICU nurses with medical/surgical nurses and examined the correlation between personality and anxiety using the MBTI. A chi-square analysis revealed that ICU nurses possess a higher frequency of introvert qualities (χ^2 (1) = 18.36, p< 0.001). A Pearson correlation coefficient revealed a significant correlation between the introvert traits and anxiety, (r(39) = 0.34, p< 0.02). Analysis of the all nurses (N = 96) reflected ISFJ personality dominance (17.7%) and self-driven pursuit into the nursing profession. Particularly, I (73%) and S (67%) characteristics reflected in the sample suggest systematic, thorough, hardworking, sympathetic, concerned, caring attributes. However, nineteen percent of ICU nurses demonstrated more prominent introversion, intuition, thinking, and perceiving (INTP) characteristics within their group.

Relevant to the present research study, the researcher reviewed a large meta-analysis testing relationships between the Big Five personality traits and coping. Conner-Smith and Flachsbart (2007) reviewed 165 previous studies collectively comprising

approximately 33,000 participants. Of these studies, only three investigated this relationship specifically in nurses and nursing students (N=286). Coping models incorporated in the study included: (a) Lazarus and Folkman's depiction of problem-focused (control of stressor) and emotion-focused (support seeking) coping, (b) primary control (changing the stressor) and secondary control (adaptation through cognitive restructuring) coping, and (c) engagement (management of stressor) and disengagement (avoidance) coping.

Stress severity was the strongest moderator of problem solving in extroversion, neurotic, and agreeable personality traits. Coping was also a strong moderator of problem solving in extroversion, neurotic, agreeable, and conscientious personality traits. Intellectual openness demonstrated no significant relationship with coping method.

Mean correlations between personality and broad measures of engagement/disengagement revealed only one prominent relationship between neuroticism and broad disengagement ($r = .27$). When comparing the coping patterns of primary control, secondary control, and narrow disengagement with personality, a positive correlation existed between: (a) extroversion and primary control ($r = .19$), (b) neuroticism and narrow disengagement ($r = .28$), and (c) conscientiousness and primary control ($r = .18$). Mean correlations for specific coping strategies revealed positive correlations between extroversion and primary control through problem solving ($r = .20$), emotional social support ($r = .25$), and mixed social support ($r = .24$), as well as secondary control through cognitive restructuring ($r = .22$).

Moderate positive correlations existed between neuroticism and disengagement/maladaptive characteristics of wishful thinking ($r = .35$), negative

emotion focus ($r = .41$), and substance abuse ($r = .28$). Agreeableness exhibited positive correlations with primary control using social support ($r = .12$), as well as secondary control through cognitive restructuring/adaptation ($r = .14$), and religious coping ($r = .12$) with a negative correlation with substance abuse ($r = -.18$). Significant correlations were found between intellectual openness and primary control through problem solving ($r = .14$) and secondary control through cognitive restructuring/adaptation ($r = .15$), but a negative correlation was present for religious coping ($r = -.12$). Positive correlations between conscientiousness and problem solving ($r = .30$) and cognitive restructuring ($r = .20$) were also demonstrated (Conner-Smith & Flachsbart, 2007).

Critical Incidents

O'Connor and Jeavons (2003) described perceived critical incidents among registered nurses. Two hundred and twenty-seven participants, 18 of whom were ICU nurses, completed the Clinical Events Questionnaire (CEQ). Fifty-eight percent of the participants had experienced a critical incident within the previous year, with the three most frequently experienced critical incidents being verbal abuse from staff members (19%), respiratory or cardiac arrest (17%) , and violent actions by patients and family members (12%). Interestingly, the researchers addressed insufficient staffing, patient overload, and unrealistic expectations as general stressors, whereas 6% of the participants listed these stressors as "other events" that they considered critical incidents.

Stress in Nursing

In 2001, the American Nurses Association (ANA) conducted an online survey to address what specific workplace stressors contributed to nursing attrition. Over 4,800

nurses completed the survey and reported that the acute/chronic effects of stress and being overworked (71%) were their highest concerns in choosing to leave the nursing profession. Approximately 80% of the nurses reported they did not feel safe in their current workplace (Goodin, 2003).

Dugan and colleagues (1996) examined the stress levels of nurses employed in a 500-bed acute care facility over a 3-month continuum using the Stress Continuum Scale (SCS). Data revealed that the mean stress scores over the 3-month interval were 5.7, 5.8, and 5.9, respectively, as measured on a 0 (minimal stress) to 10 (maximum stress) Likert scale. Half of the nurses reported stress levels above 6.0, while more than a quarter of the nurses reported stress levels of 7.5 or higher.

Edwards, Cockerton, and Guppy (2007) sought to determine the effects of work-related and non-work stressors on work-related, non-work, and general well-being with over 450 nurses participating in the study. Edwards and colleagues findings revealed that work-related stressors have a significant causal-effect upon all domains of well-being. The most significant finding existed between work-related stressors and general well-being. Non-work stressors had only a mild causal-effect on all domains of well-being.

Critical Incident Stress in Nursing

Laws (2001) performed a descriptive study examining whether critical care nurses who had performed CPR experienced critical incident stress. Thirty-one critical care nurses responded to a questionnaire that explored physical and emotional effects of having performed CPR. Laws conducted personal interviews with 18 of the 31 participants who had performed CPR within a one year time period. Of those nurses

surveyed, 48% reported that they experienced disturbing feelings as a result of visual images of the CPR procedure.

Fifty-five percent of survey participants reported suffering from nightmares related to a CPR event. Eighty-three percent of interviewed participants reported experiencing fight-or-flight responses during CPR, post-CPR fatigue, and the desire to detach themselves from the procedure. The majority of those interviewed (83%) described unpleasant recollections of blood and body fluid exposure, sounds of cracking ribs, and distressing visual images. Fifty percent identified a visual or auditory stimulus associated with having performed CPR that triggered an emotional response. Collectively, a large portion of the participants suffered from symptoms of critical incident stress (Laws, 2001).

Zuzelo (2007) explored various nursing scenarios that created moral distress in 100 nurses. Scenarios leading to high levels of moral distress included:

1. Following family's wishes for the patient's care when it did not ultimately benefit the patient

2. Following the family's wishes to continue life support when it was not in the patient's best interests

3. Initiating extensive life-saving actions that were viewed as only prolonging imminent death

4. Continuing to participate in care for a hopelessly injured patient when no one will make a decision to "pull the plug"

5. Following orders for pain medication even though the medication did not provide effective pain control

Critical Incident Stress Management

Much controversy surrounds this concept. Many theorists argue that critical incident stress management (CISM) methods initially proposed by its creators may

actually provoke harm in individuals if initiated in an inappropriate manner. Many theorists maintain that during the acute period following an incident, individuals are unaware of the impact created by the traumatic event (Devilly, Gist, & Cotton, 2006; Kennedy-Moore & Watson, 2001). Most of the studies supporting CISM have been performed within male-oriented professions (Mitchell, 2006). However, specific gender differences in the severity, frequency, and perception of stressful events are well documented (Vagg & Spielberger, 1999). How the reported efficacy of CISM can possibly be generalized to include a predominantly female profession remains unclear.

CISM guidelines mandate that initial treatment should be implemented within 48 to 72 hours following the event, but expression-related interventions are actually most helpful beyond this time interval, frequently 8 to 12 weeks following the event, and benefits often take time to emerge (Devilly, Gist, & Cotton, 2006; Kennedy-Moore & Watson, 2006). The rationale behind this concept is that, during immediate and intense distress, individuals exhibit limbic responses to their despair which hinders rational and experiential processing of the event and its impact (Kennedy-Moore & Watson, 2006). Bonnano (2004) argues that the transient perturbations are very natural in resilient individuals and these individuals exhibit a stable trajectory. He contends that resilient individuals are inappropriately categorized as distressed individuals. Resilient people function best when allowed their own coping method over a course of individual timing.

Distress expression in a supportive relationship among empathetic individuals exposed to similar circumstance results in enhanced support when provided during an intermediate level of intensity rather than during high levels of distress (Devilly, Gist, & Cotton, 2006). Peer groups and seminars held within nursing organizations ensure higher

participation and health-promoting benefit (Caufield, Chang, Dollard, & Elshang, 2004). Mechanisms created within a nursing body or organization that focus on stress reduction allow nurses to feel safer and more secure in stressful environments (Gelsema, Doef, Maes, Akerboom, & Verhoeven, 2005). This approach also allows direct attention to be paid to the intensity and frequency of particular stressors and what meaning critical care nurses attribute to those events (Vagg & Spielberger, 1999). However, for those individuals that display resulting psychopathology, professional interventions such as cognitive behavioral therapy and psychotropic medications should be implemented (Bonnano, 2004; Devilly, Gist, & Cotton, 2006; Everly and Mitchell, 2000; Kennedy-Moore & Watson, 2001).

Therapeutic Intervention

An explorative study performed by Cronquist and colleagues (2006) described the experiences of 32 participating ICU nurses and what support they had experienced in critical care situations. The participants reported that the most common types of support available to them were peer groups, structured group sessions, writing activities, and crisis management lectures. Many of the nurses stated that frequently the burden of finding support fell upon them. If nurse managers and peers were viewed as unapproachable and uncaring, then nurses suffering from a stress-related situation did not feel comfortable approaching their colleagues. The importance of peer support resonated through every interview. Open group alliance was said to be the most natural means of stress relief.

Rowe (2006) studied the effects of sequential stress management/adaptive coping training exercises on emotional exhaustion in 126 health care employees. Two

experimental groups were examined: experimental group 1 received training for 90 minutes once weekly during a 6-week period while experimental group 2 received the same training plus a 60-minute refresher course at 5-, 11- and 17-month intervals. Emotional exhaustion was measured using the Maslach Burnout Inventory (MBI) prior to therapy then at 2 and 6 months, 1 year, 2 years, 2.5 years and 4 years. Initial scores for both groups resembled those of the control group.

Mean scores for group 1 reflected a decrease in emotional exhaustion at the 2- and 6-month period when compared to baseline. However, mean levels of emotional exhaustion had returned to baseline within one year. On the other hand, mean scores for group 2 showed similar reduction in emotional exhaustion during the 2- and 6-month intervals but continued to demonstrated stable reduction throughout the study. No fluctuation was noted in the mean scores of the control group (Rowe, 2006).

Bowman and Stern (1995) examined occupational stress and coping in 187 female registered nurses. Seven major sources of stress were assessed using the Nursing Stress Scale (NSS). The Ways of Coping Checklist (WCC) developed by Lazarus and Folkman was used to examine coping strategies relevant to the work environment. Regression analyses were performed to explore relationships between coping behavior and perceived effectiveness in both low-control and high-control situations.

Surprisingly, problem-reappraisal coping demonstrated more effective outcomes in low-control episodes than problem-solving coping or avoidance coping. In addition, problem-reappraisal coping was more effective in high-control episodes when compared to problem-solving episodes, a situation in which theoretically the latter should be most

effective. However, problem-solving coping demonstrated the highest impact on positive affect and well-being (Bowman & Stern, 1995).

Summary

This literature review was conducted to illustrate the body of knowledge that currently exists in the realm of critical incident stress and personality as they pertain to critical care nurses. Recent literature fosters the awareness that critical care nurses are vulnerable to critical incident stress in similar ways extensively identified in emergency personnel. Although it has been established that critical care nurses typically demonstrate certain personality traits that foster caring, nurturing dispositions, susceptibility to stress and burnout have also been linked to these qualities.

Correlating personality traits with critical incident coping methods provides a novel approach to supporting critical care nurses during a vulnerable period. Evidence has been established regarding failure to overcome stressful events if appropriate intervention is not provided. Critical care nurses face these traumatic events often without any auxiliary support mechanisms. By identifying individual personalities of critical care nurses and correlating specific methods of coping, supportive measures can be implemented to ensure optimal coping once a critical incident has occurred.

Chapter 3

Methodology

Introduction

This chapter describes the research methods utilized to demonstrate a distinct correlation between critical care nurse personality and coping methods following a critical incident. The participants selected for this descriptive study are identified, along with the environment in which the study is conducted. The recruitment of the participants and the researcher's methods of ensuring protective rights are also defined.

Aspects of the timeline for the study are explained. The structure of the pilot study and subsequent large-scale research study are discussed in detail. Aspects of the design structure, including instrumentation, data collection, and data analysis, are further described. The research instrument constructed by the researcher and the method by which the author established reliability of the tool are discussed. Several possibilities for dissemination of research findings are also proposed in the final section of this chapter.

Research Design

A descriptive correlational study was performed in which critical care nurses will complete questionnaires, identifying personality traits of these nurses and their chosen pattern of coping after critical incidents. It was the researcher's intent to identify distinct personality traits prevalent in critical care nurses along with methods of coping that have been previously utilized and deemed effective in minimizing critical incident stress so that a relationship between the two variables could be described. With the assumption that the critical care nurses who participate have encountered a critical incident during their practice, descriptive research best supported the researcher's intent to describe the

relationship between the two defined variables. This study was intended to serve as the impetus for future research in this area. With the knowledge obtained from this research, interventions to reduce critical incident stress and promote healthy outcomes can be developed for critical care nurses.

Graduate nursing students attending the research seminar course at Southern Adventist University were offered the opportunity to complete the Preferred Methods of Stress Reduction questionnaire. Participants were asked to provide subjective evaluation of the tool. Data obtained from this sample were used for the sole purpose of testing reliability of the Preferred Methods of Stress Reduction Questionnaire and refining of the tool.

The descriptive study was performed in two phases. First, a pilot study was conducted at the University of Alabama at Birmingham (UAB) Comprehensive Nursing Conference held March 29 and 30, 2007, at the Wynfrey Hotel at Riverchase Galleria in Birmingham, Alabama. Written permission to conduct the pilot study was granted via email and in writing by Shannon Graham, RN, MSN, AOCN, of the conference steering committee. It was stated by Shannon Graham that no Institutional Review Board (IRB) approval was necessary. The pilot study provided an opportunity for the researchers to assess efficacy of the study design, define ways in which the study could be modified, and determine the overall feasibility of a larger study.

A poster presentation describing aspects of the research study and participant's rights was displayed at the UAB Comprehensive Nursing Conference during March 29 and 30, 2007. Seventy-eight questionnaires were distributed over a 2-day period through convenience sampling. Questionnaires were anonymously and voluntarily completed

under the basis of implied consent. Each questionnaire was numbered with a corresponding raffle ticket affixed to the questionnaire. Once completed, the questionnaires were deposited into a designated collection box by the participants to ensure each participant's anonymity. One door prize of $20.00 value provided by the researcher was raffled off at the closing session of the conference by Shannon Graham to one study participant. Each conference attendee participating in the study was provided a small incentive valued at less than five dollars.

Once efficacy of the descriptive study was established through the pilot study, the researcher conducted further research at the National Teaching Institute (NTI) Critical Care Exposition sponsored by the AACN. The exposition took place in Atlanta, Georgia, during May 19 through 24, 2007. Approval for the research study was obtained via email and in writing from Bonnie Baker, RN, MHA, Program Development Specialist for AACN. The theme for the 2007 conference focused on healthy work environments for critical and acute care nurses.

The researcher and a research assistant were stationed at the Conference Information Center. Two-thousand questionnaire brochures were distributed to conference attendees through convenience sampling. Questionnaires will be completed by participants on a voluntary basis with implied consent established by participants completing the study. The participants were instructed to deposit the questionnaires into a designated collection box to again ensure anonymity.

Each questionnaire was numbered according to an attached corresponding raffle ticket. Upon completion of the questionnaire, participants were instructed to keep the raffle ticket and redeem the ticket for one of three incentive prizes available. Three

questionnaires were randomly chosen by the research assistant, the raffle ticket number was recorded, and an incentive prize was set aside for the participants who had the corresponding raffle tickets. Distribution of prizes took place on May 24, 2007 by Katie Schatz, NTI Work Group Coordinator.

Sample

Fourteen graduate nursing students attending the research seminar course participated in the evaluation of the Preferred Methods of Stress Reduction Questionnaire. A total of 43 nurses participated in the pilot study at the UAB Comprehensive Nursing Conference. A total of 986 nurses participated in the NTI Critical Care Exposition during May 19 through 24, 2007.

Inclusion criteria for the study were unreserved and very expansive. Nurses who attended either conference were provided the opportunity to participate. The Demographic Questionnaire provided each participant selections from which to choose both specific patient care areas and specialty areas in which the participant was currently practicing. This offered the researchers the opportunity to delineate participants into critical care and non-critical care specialties. Comparisons could be made of participants within the critical care realm and between critical care and non-critical care participants. Any questionnaire that was not fully completed was excluded from data analysis.

Ethical Considerations

Approval of this study was obtained from the IRB at Southern Adventist University (Appendix B). Participant's rights were clearly documented in both the recruitment poster and the questionnaire brochure. The researcher assumed implied consent for each participant completing the questionnaire. Participants were able to

withdraw from the study at any given time prior to submitting the questionnaire.

Participants' rights were maintained following the nine ethical principles outlined in the

Ethical Guidelines in the Conduct, Dissemination, and Implementation of Nursing

Research established by the American Nurses' Association (Polit & Beck, 2004).

Data Collection

A four-page questionnaire brochure was used for data collection. Page one of the

brochure provided the participant with clinical examples of critical incidents, an overview

of the purpose and structure of the study, and researcher contact information (see

Appendix D). Critical care nurse personality was evaluated using the 40-item Mini-

Markers survey provided on the second page of the brochure (see Appendix E). Page

three provided the 45-item Preferred Methods of Stress Reduction questionnaire (see

Appendix F) to assess preferred coping methods utilized by critical care nurses.

Demographic information was addressed in a brief 12 question survey (see Appendix G)

on the final page of the brochure. Personality and preferred coping methods utilized by

critical care nurses after a critical incident were the variables to be studied in this

descriptive study.

Data Analysis

Internal consistency (Chronbach alpha) of the Mini Marker's questionnaire and

the Preferred Methods of Stress Reduction questionnaire were calculated to evaluate

reliability individually and as a combined screening product. Ranked responses to

personality traits and preferred coping methods were grouped categorically and therefore

were considered nonparametric data. Factor analysis was performed on the Preferred

Methods of Stress Reduction questionnaire to establish common themes present among

the 45 coping variables. A Spearman *rho* correlational coefficient was calculated in order to summarize the relationship between critical care nurse personality and preferred coping methods following a critical incident. All data was analyzed using the SPSS 15.0 application.

Limitations

This study focused on critical incident stress that is experienced as part of clinical practice in the critical care setting. The study did not take into account that critical care nurses may experience critical incidents outside of the critical care setting that may also negatively impact their lives. Time constraints and choice of study site may have limited the findings of the study. Because the study included only the responses from critical care nurses, the ability to generalize findings to other nursing populations is limited.

Dissemination of Research Findings

It was the researchers' intent to submit a study manuscript to a professional nursing journal for publication. The researchers submitted a research abstract to the AACN for oral presenter selection at the 2008 NTI Critical Care Exposition that was declined. Sigma Theta Tau International (STTI) also received a research abstract of the study conclusions, which was accepted for presentation at the 19th International Nursing Research Congress held in Singapore. An abstract submitted by the researchers to the Southern Nursing Research Society (SNRS) was accepted for presentation at the 2nd Annual Southern Nursing Research Conference held in Birmingham, Alabama. Research information was provided to the University of Tennessee at Knoxville (UTK) by the researcher as part of the doctoral program application portfolio. It is the researcher's aspiration to continually develop the nursing research themes explored in this thesis.

Conclusion

A descriptive correlational design was chosen for this research study involving critical care nurses. Given that critical incident stress and the subsequent effects created by this phenomenon have been investigated in limited detail among this specific group, it was the researcher's intention to shed light upon the devastating effects that critical incidents create. Personality traits of nurses have been explored with resounding themes of caring, nurturance, and humility, qualities that predispose critical care nurses to the debilitating effects of critical incidents.

A correlation between critical care nurse personality and effective methods of coping offers insight into critical incident stress interventions that may promote health and healing among these nurses. Participants involved in the study were representative of critical care nurses nationwide, and precautions were taken to ensure their safety and anonymity. The findings from this study serve as a platform for future investigation of successful stress reduction techniques that are tailored to individuals with specific personality traits.

Chapter 4

Data Analysis

Introduction

The analysis of the data obtained from both the pilot study and the large descriptive study are presented in this chapter. Demographic and correlational analyses specifically for the pilot study are presented initially, followed by demographic data, factor analysis of the Preferred Methods of Stress Reduction Questionnaire, tool reliability, and correlational analyses of data obtained from the large descriptive study in order to preserve the sequential flow of the entire study.

Pilot Study

The pilot study, held at the UAB Comprehensive Nursing Conference in Birmingham, Alabama, offered insight into the research question regarding an existing relationship between personality and preferred methods of coping after a critical incident. The study also provided the researchers with an opportunity to evaluate usability and effectiveness of the four-page brochure style tool and to analyze reliability of the Mini Markers and the Preferred Method of Stress Reduction questionnaires individually and combined. Findings from this study gave the researchers a regional perspective of personality and coping. It also served as a sounding board for future research concepts.

Participation

The researchers had anticipated providing 100 questionnaires at the conference. Seventy-eight questionnaires were distributed by the researcher during the poster presentation. Of he original 78 questionnaires, 46 questionnaires were returned with 45 questionnaires completed. Conference attendees represented predominantly critical care

and oncological care practices. During the conference, the researcher provided two question-and-answer sessions for conference participants and received much positive feedback as to the content and direction of the study. It was voiced that this particular research concept was novel, valuable, and relevant to issues involving critical care nurse attrition and subsequently the national nursing shortage.

Demographic Data

The study sample consisted predominantly of Caucasian females from the Southeast region. The participants ranged in age from 25 to 62 years with a mean age of 44 years. The majority of the participants were between 40 and 49 years of age (42.2%). Years practiced in critical care settings ranged from less than one year to 36 years with a mean of 11.8 years. The majority of participants had practiced in a critical care area less than 10 years (51.1%). Patient care areas in which participants were employed included: critical care (52.2%), emergent care (4.3%), intermediate/stepdown (15.2%), recovery/PACU (6.5%), catheterization lab (4.3%), surgery (4.3%), floor (17.4%), and other (26.1%). As mentioned previously, AACN identifies all but surgery and floor areas as critical care specialty areas.

Specialty areas in which the participants practiced included: cardiac (23.9%), medical (26.1%), surgical (19.6%), and trauma (17.4%). Eighty-five percent of the participants reported full-time employment. The majority of the participants had obtained a baccalaureate degree (39.1%). Most reported active basic life support (BLS) and advanced cardiac life support (ACLS) certifications. However, few participants acknowledged possessing the CCRN certification. Participants mostly reported their level of nursing expertise as expert (47.8%) and intermediate (30.4%).

Dominant personalities exhibited by the participants were agreeableness, conscientiousness, and extraversion, respectively. Nine of the participants did not exhibit a dominant personality but rather a mixture of two or more prominent personality traits and were labeled accordingly. Of importance, only one participant exhibited emotional stability as a true dominant personality trait (Table 1).

Table 1

Personality Dominance		
Dominant Personality (N=46)	frequency	percent
extraversion	7	15.2%
agreeable	15	32.6%
conscientious	13	28.3%
emotional stability	1	2.2%
intellectual openness	1	2.2%
personality mixture	9	19.6%

Instrument Reliability

Instrument reliability was determined using a Chronbach alpha coefficient. The Mini Markers survey demonstrated a reliability coefficient of 0.88. Saucier (1994) described similar reliability coefficients of 0.78 to 0.82 during initial testing of the Mini Markers questionnaire. The reliability of this tool was considered favorable for future studies. The Preferred Method of Stress Reduction questionnaire demonstrated a reliability coefficient of 0.80, establishing more favorable internal consistency than previously indicated. The reliability of the two questionnaires used as a collaborative tool reflected similar consistency.

A factor analysis was performed using participant responses obtained from the Preferred Method of Stress Reduction questionnaire. Factor extraction was attempted using principal component analysis with an eigenvalue of 0.50 and initially revealed three factors with nine variables excluded. Instead, the researchers chose to manually categorize the 45 stress reduction variables into seven factor groupings (Appendix C). However, analysis of instrument reliability when implementing the seven factor categories decreased the alpha coefficient to 0.69.

Analysis of Hypothesis

Correlational analysis was performed using a Pearson coefficient to establish relationships between the five personality traits of extroversion, agreeable, conscientious, emotional stability, and intellectual openness and coping factors depicting preferred methods of coping after a critical incident. Seven categories of coping factors were defined: (a) individual social, (b) group social, (c) nonsocial, (d) harmful/addictive, (e) spiritual, (f) passive activity, and (g) active activity. Moderate positive correlations were found between agreeable personality and active activity ($r(39) = .328$, $p < .05$) and between intellect openness and active activity coping ($r(40) = .369$, $p < .05$). In addition, a moderate negative correlation was demonstrated between emotional stability and nonsocial coping ($r(40) = -.393$, $p < .05$). The remaining pairings demonstrated very weak and insignificant relationships.

Summary

Although the findings of this small pilot study did not provide evidence of strong correlations between personality and methods of coping after critical incidents, the study did provide the researchers with insight into the more prominent personalities of nurses

participating in the study. The study also reflected that emotional stability and intellectual openness are the least prominent traits of the nurses participating, whereas agreeable and conscientious personality traits are by far the most prominent in the participants. Reliability of the Mini Marker and Preferred Method of Stress Reduction questionnaires remained acceptable. The researchers found that proceeding with the large descriptive study would be beneficial in an attempt to further explore personality traits and establish a correlation between personality and coping and provide support for the newly developed Preferred Method of Stress Reduction questionnaire.

Descriptive Study

The large descriptive study, held at the NTI Critical Care Exposition in Atlanta, Georgia, provided the opportunity to investigate the relationship between personality and preferred methods of coping after a critical incident in a nationally diverse convenience sample of critical care nurses. The study also provided the researchers with data to further evaluate internal consistencies of the Mini Markers and the Preferred Method of Stress Reduction questionnaires individually and combined. In addition, this scenario created a profound opportunity to introduce the concept of a relationship between personality and methods of coping in relation to critical incident stress.

Participation

The researcher and research assistant distributed 2,000 questionnaire brochures at the NTI Critical Care Exposition. A total of 986 nurses participated in this study: 79 males and 900 females. Conference attendees represented a broad range of nationalities and ethnicities. Professionally, most of the attendees practiced in critical care settings including pediatric and neonatal critical care specialties. During the conference, the

researcher and research assistant provided brief explanation of the study and the concept of personality and coping effecting critical incident stress outcomes.

Demographic Data

The study sample predominantly consisted of females (91.4%) of Caucasian race (80.7%). Mean age of participants was 44.5 years. The mean number of years practiced in nursing was 19.4 years and in critical care settings was 15.4 years. Participants from all regions of the continental United States participated in the study; however, the areas most prominently represented were the South and Northeast regions. Patient care areas and specialty areas in which the participants practiced are summarized in Table 2 and Table 3, respectively.

Table 2

Participant Employment by Patient Care Area		
Patient care area (N = 985)	Frequency	Percentage
Critical:		
Critical care	809	82.1%
Emergent care	57	5.8%
Intermediate/stepdown	135	13.7%
Recovery/PACU	47	4.8%
Catheterization lab	30	3.3%
Non-critical:		
Floor	25	2.5%
Surgery	20	2.0%
Other area not mentioned previously	128	13.0%

Table 3

<u>Participant Employment by Patient Care Area</u>

Specialty area (N = 985)	Frequency	Percentage
Trauma	178	18.1%
Burn	26	2.6%
Medical	357	36.2%
Surgical	395	40.1%
Neuromedical/neurosurgical	177	18.0%
Cardiac	371	37.7%
Emergency department	58	5.9%
Cardiac surgical	243	24.7%
Code response team	154	15.6%
Pediatrics	61	6.2%
Neonatal	8	0.8%
Educator	120	12.2%
Other area not mentioned previously	106	10.8%

Eighty-eight percent of the participants reported full-time employment. The majority of the participants had obtained a baccalaureate degree (47.1%). Most reported active basic life support (BLS) and advanced cardiac life support (ACLS) certifications. Half of the study participants acknowledged possessing the CCRN certification. Participants mostly reported their level of nursing expertise as expert (53.1%).

Dominant personalities exhibited by the participants were predominantly agreeableness and conscientiousness. However, males exhibited intellectual openness more prominently than females as the third most common personality trait. Of note, when considering dominant personality related to gender, emotional stability remained the least dominant personality trait demonstrated among all study participants. Eighty-nine participants demonstrated a mixture of two or more prominent personality traits and were labeled accordingly (Table 4).

Table 4

Personality Dominance by Gender

Dominant Personality	Female (N = 900)		Male (N = 79)	
	Frequency	Percent	Frequency	Percent
extraversion	68	7.8%	6	7.6%
agreeable	397	44.1%	24	30.4%
conscientious	243	27.0%	25	31.6%
emotional stability	18	2.0%	1	1.3%
intellectual openness	66	7.3%	8	10.1%
personality mixture	80	8.9%	9	11.4%

Instrument Reliability

Instrument reliability was determined using a Chronbach alpha coefficient. The Mini Markers survey demonstrated a slightly lower reliability coefficient of 0.82. The Preferred Method of Stress Reduction questionnaire demonstrated a reliability coefficient of 0.82, with internal consistency remaining relatively stable. The researchers evaluated the internal consistency of the two questionnaires combined and found that the questionnaires used as a collaborative tool reflected an alpha coefficient of 0.83.

A factor analysis was performed using participant responses obtained from the Preferred Method of Stress Reduction questionnaire. Factor extraction was completed using principal component analysis, eigenvalue of 0.30, Varimax rotation and Kaiser normalization revealing five factor clusters that were subsequently titled relax, spiritual, consolation, counsel, and talk. Seven unrelated variables were identified: (a) use illicit drugs, (b) do nothing different, (c) keep very busy, (d) resign from my job, (e) gamble, (f)

start smoking/smoke more, and (g) seek intimate sexual relations. The five factor clusters are thus referred to as patterns of coping and are presented in Appendix H.

Analysis of Hypothesis

Descriptive statistics summarizing distribution and variability of the study sample are presented in Table 5. Analysis was performed on the mean scores of individual personality traits and individual coping patterns obtained from the study participants. Most prominent personality traits for the group were identified as agreeable and conscientiousness. The most prominent coping pattern revealed was talking and the least prominent coping pattern was counseling.

Table 5

Descriptive Statistics of Sample

Personality trait	Mean	Standard deviation	Coping Pattern	Mean	Standard deviation
agreeable	7.61	0.88	talking	3.81	0.68
conscientious	7.34	0.99	relaxation	2.58	0.67
intellectual openness	6.56	1.08	spiritual	2.26	0.88
extroversion	6.12	1.45	consolation	2.24	0.55
emotional stability	5.97	1.23	counseling	1.46	0.47

Correlational analysis using a Spearman *rho* coefficient examined existing relationships between dominant personality type and the five individual coping patterns. No significant relationship could be established between the two variables, nor was there any significant relationship found between dominant coping pattern and each of the five personality traits. Additionally, correlational analysis between dominant personality type and dominant coping pattern revealed no conclusive relationship. Inferential analysis

using the chi-square test of independence revealed no significant relationship between dominant personality type and dominant coping pattern ($\chi^2(15) = 14.825$, $p > .05$).

Correlational analysis was performed using a Spearman *rho* coefficient to establish relationships between the five personality traits of extroversion, agreeable, conscientious, emotional stability, and intellectual openness and the five patterns of coping previously described as relaxation, spiritual, consolation, counseling, and talking. A positive correlation existed between intellectual openness and relaxation (*rho*(922) = .238, $p < .01$). In order to avoid Type II error, a power analysis was performed to further evaluate this relationship. The power analysis for this particular correlation revealed a power of .99. Similarly, the analytical data revealed a positive correlation between talking and agreeable personality (*rho*(904) = .252, $p < .01$) and between talking and extroversion personality (*rho*(905) = .218, $p < .01$) with power analysis revealing power of .99 for both relationships.

Prominent negative correlations were found between conscientious personality and emotional stability (*rho*(918) = -.319, $p < .01$) and conscientious personality and consolation (*rho*(928) = -.226, $p < .01$). A power of .99 was established for both correlations. Positive relationships were established between emotional stability and spiritual coping (*rho*(921) = .142, $p < .01$), agreeable personality and spiritual coping (*rho*(930) = .181, $p < .01$), and between conscientious personality and talking (*rho*(907) = .129, $p < .01$) with power of .80. The remaining pairings demonstrated insignificant relationships.

Summary

Several pertinent themes were established through the data analyses of this research study. Initially, five distinct coping patterns were established as a result of the Preferred Methods of Stress Reduction questionnaire. This investigative tool demonstrated consistent reliability in two separate studies involving nursing professionals. Items provided within the questionnaire demonstrated relevant descriptions of coping methods utilized by nurses following critical incidents. This research tool will potentially serve as a consistent, relevant instrument for data collection in future nursing research.

Secondly, although this descriptive study did not provide relatively strong correlations between dominant personality and dominant coping methods following critical incidents, it did provide several interesting concepts upon which future nursing research can expand. Nursing researchers had not performed detailed investigation into dominant personality traits of critical care nurses in recent years. Although emergency nurses were not largely represented in this study, the resultant findings demonstrated strong similarities between the nurse personalities represented in this study and those studied earlier by Atkins and Piazza (1987). Boyle and colleagues (1991) identified social support as one of the coping methods most utilized by critical care nurses, a similar concept established by this study presented as talking to peers, family, and significant others.

Chapter 5

Discussion and Implications

The original purpose of this descriptive study was to explore relationships between critical care nurse personality and coping methods during critical incidents. This chapter provides a brief review of relevant findings, recommendations for future research, and closing summary.

Discussion and Implications of Findings

In general, this study provided insight into the unique characteristics of critical care nurses and specific activities and interactions they rely upon to reduce the intense stress they encounter while providing lifesaving interventions for acute, unstable, and challenging patients. Concepts explored in this manuscript should serve as an investigational foundation for fostering resilience and coping when facing the physical, emotional, psychological and spiritual challenges of critical care nursing. By establishing predictive indicators of effective and ineffective coping behaviors, nurse managers and nursing administration can identify individuals at risk for inadequate coping ability. In doing so, practical supportive measures can be introduced to establish healthier, dependable working environments.

There were several relationships identified between personality traits and coping methods. Agreeableness is the most prominent personality among critical care nurses. Although this personality trait seems ideal for providing selfless, vigilant nursing care, it also creates an environment of ethical and moral distress for nurses especially when conflict arises. Agreeableness can foster feelings of inadequacy and guilt if appropriate coping is not utilized. The unrealistic expectations of "pleasing everyone" can be

ultimately problematic, exhausting and unrewarding. Endless suffering and loss of life can take an unbearable toll on altruistic behavior. Similarly, conscientious nurses frequently struggle with moral dilemmas concerning inadequate care, contradictions between futile care practices and family and physician demands, and inability to accomplish what is right for the patient.

Previous research findings have revealed similar correlations between neuroticism and negative emotion focus, maladaptive coping, and substance abuse. Conner-Smith and Flachsbart (2007) reported neuroticism as being positively correlated with substance abuse, while agreeable and conscientious personality traits were negatively correlated with substance abuse. The current research study established distinct negative correlations between conscientious and emotional stability (anti-neuroticism) traits and consolation (unhealthy behaviors). Conner-Smith and Flachsbart documented negative correlations between neuroticism and religious coping, while emotional stability was positively correlated with spiritual intervention in the present study. This raises the question of whether it would be therapeutic to provide screening for critical care nurses prior to their critical care experience so that addiction and behavioral counseling, peer groups and support systems are available.

Comparisons of research findings in this study and those reported by Conner-Smith and Flachsbart (2007) revealed numerous conceptual similarities. When reviewing specific coping strategies, Smith and Flachsbart documented correlations between agreeable personality and emotional social support, religious coping, and cognitive restructuring/adaptation interventions. As compared to the present research study, the

researchers found a similar correlation between agreeable personality and talking (ie: emotional social support/adaptation) and spiritual intervention.

Counseling, talking, and relaxing contain aspects of primary and secondary control strategies as described in the literature. The current study identified positive correlations between these interventions and extroversion, conscientious, and intellectual openness traits in varying degrees. Conner-Smith and Flachsbart (2007) described similar findings as well. Most importantly, emotional stability was the personality demonstrated least in critical care nurses. This attribute promotes the assumption that critical care nurses may enter the nursing profession with feelings of inadequacy or low self-esteem in hopes of filling some emotional or relational void. This behavior would support an environment of disastrous, unfulfilling relationships between caregiver and patient especially in critical care settings where there is increased incidence of patient morbidity and mortality. Buhler and Land (2003) supported this assumption when data analyses demonstrated a distinct correlation between neuroticism, emotional exhaustion, and burnout in critical care nurses.

Previous research indicates problem-reappraisal coping may be the most effective approach in resolving both high-control and low-control situations (Bowman & Stern, 1995). This coping method provides personal acknowledgement and expression of emotions, understanding of the stressful event and its impact, and support-seeking behavior. Looking again at the meta-analysis of Conner-Smith and Flachsbart (2007), both extroversion and agreeableness display positive correlation with support-seeking behavior. This was confirmed in the current research study, also. With agreeableness being the predominant personality in critical care nurses, one can assume that critical care

nurses employ very healthy, adaptive coping styles. However, this does not support the reality that critical care nurses frequently leave their profession due to low-control situations, emotional exhaustion, and moral distress. What factors might be impacting these variables other than personality?

The results of this study raise several potential topics for further review. This information will serve as an expansive literature base for future nursing research. Additionally, it offers guidance for fellow nursing researchers and theorists into factors influencing distress and healthy outcomes in critical care nursing. Pertinent objectives for developing this research concept are to promote further understanding of critical incident stress, its impact on health and well-being, and ways of fostering support and resilience.

Recommendations

Recommendations for future research include exploring structure interventions that have already been established, particularly critical incident stress management, and how well it can be incorporated into the critical care nursing environment. Because social support appears to be the one element critical care nurses can depend upon in times of crisis, protocols and pathways of care should be developed and implemented in high stress environments. Results of this study reflect findings predominantly in critical care nursing. There are several subspecialties included in critical care nursing that demonstrate variances from group findings. These subspecialties would benefit from explorative nursing research into critical incident stress specific to their area of practice.

One interesting prospect is to evaluate critical care nurse perception of critical incidents immediately after stressful events instead of through retrospective recollection to foster pure thoughts, emotions, and coping patterns. Answers that participants provided

in this study may reflect altered personal evaluation of stress coping as positive, therapeutic, and effective over time. This may explain some of the variance in present study findings and current nursing literature.

Conclusion

This study sought to explore the phenomenon of critical incident stress, the type and frequency of preferred coping methods utilized, and what relationship exists between coping and critical care nurse personality. Certainly the data suggest that some relationship does exist in this population. However, further research is needed in order to strengthen the understanding the relationship between the two entities. Selye's model of general adaptation provides the physiological basis for understanding sequential processes of adaptive coping and what effects maladaptive or ineffective coping have on well-being.

The Mini Markers questionnaire and the Preferred Methods of Stress Reduction questionnaire provided consistent, reliable data for this study. Five coping categories identified in the Preferred Methods of Stress Reduction questionnaire served as an efficient method for comparing coping with the Big Five personality traits. In reviewing the data findings of this study, it became apparent to the researcher that critical care nurses desperately need dedicated support to promote resilience and well-being within this nursing population. The researcher offers a challenge to fellow nursing researchers to continue exploration of critical incident stress and the debilitating impact it has in critical care nursing.

References

Alspach, G. (2007). Retaining experienced critical care nurses: What matters most...
   to you? *Critical Care Nurse, 27*(2), 8-20.

American Academy of Critical Care Nurses (AACN). (2006). About critical care
   nursing. Retrieved on March 9, 2006, from
   http://www.aacn.org/AACN/mrkt.nsf/vwdoc/AboutCriticalCareNursing?
   opendocument

Atkins, J., & Piazza, D. (1987). Personality types in emergency nurses. *Journal of
   Emergency Nursing, 13*(1), 33-37.

Bailes, G. (2001). Critical incident management. *Nursing Times, 97*(25), 40.

Bannan, N. (2005). Multimodal therapy of treatment resistant depression: A study and
   analysis. *International Journal of Psychiatry in Medicine, 35*(1), 27-39.

Bisson, J. (2003). Early interventions following traumatic events. *Psychiatric
   Annals, 33*(1), 37-44.

Blacklock, E. (1998). Workplace stress: A hospital team approach. *Professional Nurse,
   13*(11), 744-747.

Bledsoe, B., & Barnes, D. (1999). Beyond the debriefing debate: What should we be
   doing? *Emergency Medical Services, 32*(12), 60-68.

Bonanno, G.A. (2004). Loss, trauma, and human resilience. *American Psychologist
   59*(1), 20-28.

Bowman, G.D., & Stern, M. (1995). Adjustment to occupational stress: The relationship
   of perceived control to effectiveness of coping strategies. *Journal of Counseling
   Psychology 42*(3), 294-303.

Boyle, A., Grap, M.J., Younger, J., & Thornby, D. (1991). Personality hardiness, ways
   of coping, social support, and burnout in critical care. *Journal of Advanced
   Nursing, 16,* 850-857.

Brosche, T.A. (2007). A grief team within a healthcare system. *Dimensions of Critical
   Care Nursing 26*(1), 21-28.

Buhler, K.E., & Land, T. (2003). Burnout and personality on intensive care: An empiric
   study. *Hospital Topics, 81*(4), 5-12.

Caine, R.M., & Ter-Bagdasarian, L. (2003). Early identification and management of critical incident stress. *Critical Care Nurse, 23*(1), 59-65.

Caufield, N., Chang, D., Dollard, M.F., and Elshaug, C. (2004). A review of occupational stress interventions in Australia. *International Journal of Stress Management 11*(2), 149-166.

Conner-Smith, J.K., & Flachsbart, C. (2007). Relations between personality and coping: A meta-analysis. *Journal of Personality and Social Psychology 93*(6), 1080-1107.

Craft, M. (2005). Reflective writing and nursing education. *Journal of Nursing Education 44*(2), 53-57.

Cronquist, A., Lutzen, K., & Nystrom, M. (2006). Nurses' lived experiences of moral stress support in the intensive care context. *Journal of Nursing Management, 14*, 405-413.

Cross, D.G., & Kelly, J.G. (1984). Personality typing and anxiety for two groups of registered nurses. *The Australian Journal of Advanced Nursing, 2*(1), 52-59.

Devilly, G.J., Gist, R., & Cotton, P. (2006). Ready! Fire! Aim! The status of psychological debriefing and therapeutic interventions: In the work place and after disasters. (2006). *Review of General Psychology, 10*(4), 318-345.

Dugan, J., Lauer, E., Bouquot, Z., Dutor, B., Smith, M., & Widmeyer, G. (1996). Stressful nurses: The effect on patient outcomes. *Journal of Nursing Care Quarterly, 10*(3), 46-58.

Dyregrov, A., Solomon, R., & Bassoe, C.F. (2000). Mental mobilization in critical incident stress situations. *International Journal of Emergency Mental Health, 2*(2), 73-81.

Edwards, J. A., Cockerton, T., & Guppy, A. (2007). A longitudinal study examining the influence of work and non-work stressors upon well-being: A multi-group analysis. *International Journal of Stress Management, 14*(3), 294-311.

Elliott, M. (2004). Reflective writing: A critical incident into a topic for research. *Professional Nurse, 19*(5), 281-283.

Espeland, K.E. (2006). Overcoming burnout: How to revitalize your career. *The Journal of Continuing Education in Nursing, 37*(4), 178-184.

Everly, G.S. (2003). Early psychological intervention: A word of caution. *International Journal of Emergency Mental Health 5*(4), 181-186.

Everly, G.S. (2006). *The Changing Face of Crisis and Disaster Mental Health Intervention.* (Available from the International Critical Incident Stress Foundation, 3290 Pine Orchard Lane, Suite 106, Ellicott City, MD 21042).

Everly, G.S., & Mitchell, J.T. (2000). The debriefing controversy and crisis intervention: A review of lexical and substantive issues. *International Journal of Emergency Mental Health 2*(4), 211-225.

Gabram, S.G., Hodges, J., Allen, P.T., Allen, L.W., Schwartz, R.J., & Jacobs, L.M. (1994). Personality types of flight crew members in hospital –based helicopter programs. *Air Medical Journal,* 13-17.

Gelsema, T.I., Doef, M., Maes, S., Akerboom, S., & Verhoeven, C. (2005). Job stress in the nursing profession: The influence of organizational and environmental conditions and job characteristics. *International Journal of Stress Management 12*(3), 222-240.

Goodin, H.J. (2003). The nursing shortage in the United States of America: An integrative review of literature. *Journal of Advanced Nursing, 43*(4), 335-350.

Gosling, S.S., Rentfrow, P.J., & Swann, W.B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality 37,* 504-528.

Groves, D. (2005). Critical incidents call for team response. *Nursing Spectrum, 13*(11), 12.

Harvey, G. (2006). Critical incident stress in ICU nursing. *Dynamics, 71*(2), 22.

Hays, M.A., Mannahan, C., Cuaderes, E., & Wallace, D. (2006). Reported stressors and ways of coping utilized by intensive care unit nurses. *Dimensions in Critical Care Nursing, 25*(4), 185-193.

Huether, S.E., & McCance, K.L. (2004). *Understanding pathophysiology* (3rd ed., pp. 222-232). Philadelphia: Mosby.

Ihlenfeld, J.T. (2004). Applying personal reflective critical incident reviews in critical care. *Dimensions of Critical Care Nursing, 23*(1), 1-3.

International Critical Incident Stress Foundation. (2001). *Critical incident stress information sheets.* Retrieved December 7, 2005, from http://www.icisf.org

Keatley, V.M. (1998). *Critical incident stress in generic baccalaureate students.* Unpublished doctoral dissertation. Loyola University.

Kennedy-Moore, E., & Watson, J. (2001). How and when does emotional expression help? *Review of General Psychology, 5*(3), 187-212.

Kwiatkowski, R. (2005). Critical incident response. *Journal of Ontario Occupational Health Nurses Association (1)*, 25-27.

Laws, T. (2001). Examining critical care nurses' critical incident stress after in hospital cardiopulmonary resuscitation (CPR). *Australian Critical Care, 14*(2), 76-81.

Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.

Lenart, S.B., Bauer, C.G., Brighton, D.D., Johnson, J.J., & Stringer, T.M. (1998). Grief support for nursing in the ICU. *Journal of Nurses in Staff Development, 14*(6), 293-296.

McClelland, H. (2006). Editorial. *Accident and Emergency Nursing, 14*(2), 69-70.

Macnab, A., Sun, C., & Lowe, J. (2003). Randomized control trial of three levels of critical incident stress intervention. *Prehospital and Disaster Medicine, 18*(4), 365-369.

Mitchell, J.T. (2006). Crisis intervention and critical incident stress management: A defense of the field. Retrieved May 29, 2006, from http://www.icisf.org/articles/acrobat%20documents/CISM_Defense_of_Field.pdf

Monahan, F.D., Sands, J.K., Neighbors, M., Marek, J.F., & Green, C.J. (2007). *Phipps' medical-surgical nursing: Health and illness perspectives* (8th ed., p. 443). St. Louis: Mosby.

Morrissette, P.J. (2004). Promoting psychiatric student nurse well-being. *Journal of Psychiatric and Mental Health Nursing, 11,* 534-540.

Morrissey, J. (2005). Staff support after trauma in A&E. *Emergency nurse, 13*(6), 8-10.

Myers, I.B., & McCaulley, M.H. (1987). *A guide to the development and use of the Myers-Briggs Type Indicator*. Palo-Alto, CA: Consulting Psychological Press.

O'Connor, J., & Jeavons, S. (2003). Nurses' perceptions of critical incidents. *Journal of Advanced Nursing, 41*(1), 53-62.

Papathanassoglou, E.D. (2006). So hard to care...critical care nursing in Hellas. *Nursing in Critical Care, 11*(5), 213-215.

Pendry, P.S. (2007). Moral distress: Recognizing it to retain nurses. *Nursing Economics 25*(4), 217-221.

Polit, D.F., & Beck, C.T. (2004). *Nursing research: Principles and methods.* Philadelphia: Lippincott, Williams, and Wilkins.

Remer, J.A. (2004). Stress case: When a critical event pushes you beyond your coping skills. *California Nurse, 14,* 14-16.

Rowe, M.M. (2006). Four-year longitudinal study of behavioral changes in coping with stress. *American Journal of Health Behavior, 30*(6), 602-612.

Saucier, G. (1994). Mini-markers: A brief version of Goldberg's unipolar big five markers. *Journal of Personality Assessment, 63*(3), 506-516.

Saucier, G., & Goldberg, L.R. (2003). The structure of personality attributes. In M.R. Barrick & A.M. Ryan (Eds.) *Personality and work: Reconsidering the role of personality in organization.* San Francisco: Jossey-Bass.

Selye, H. (1950). Stress and the General Adaptation Syndrome. *British Medical Journal, 1*(4667), 1383-1392.

Smith, A.M., Ortiguera, S.A., Laskowski, E.R., Hartman, A.D., Mullenbach, D.M., Gaines, K.A., et al. (2001). A preliminary analysis of psychophysiological variables and nursing performance in situations of increasing criticality. *Mayo Clinic Proceedings, 76*(3), 275-284.

Taber's Cyclopedic Medical Dictionary (20th ed.). (2005). Philadelphia: F. A. Davis.

Vagg, P.R., & Spielberger, C.D. (1999). The job stress survey: Assessing perceived severity and frequency of occurrence of generic sources of stress in the workplace. *Journal of Occupational Health Psychology 4*(3), 288-292.

Vere-Jones, E. (2006). Can nursing ever be stress free? *Nursing Times, 102*(39), 18-20.

Wright, C., & Smith, J. (1993). Personality profiles of nurses: A comparison between Australian and US research findings. *The Australian Journal of Advanced Nursing, 10*(3), 10-19.

Zuzelo, P.R. (2007). Exploring moral distress of registered nurses. *Nursing Ethics, 14*(3), 349-356.

Appendix A

Critical Incident Stress Reactions

Physical	Cognitive	Emotional	Behavioral	Spiritual
fatigue	hypervigilance	guilt	withdrawal	abandoned
exhaustion	uncertainty	grief	pacing	by God
chills	suspicion	anxiety	overeating	hard to pray
dizziness	blame	panic	anorexia	no spirit of
weakness	confusion	denial	increased smoking/	thankfulness
headache	nightmares	agitation	alcohol	no sense of hope
sweating	poor	irritability	consumption	no comfort from
dyspnea	comprehension	depression	antisocial acts	prayer/meditation
nausea	poor problem	anger		no yearning for
vomiting	solving	apprehension		righteousness
fasciculations	decreased	emotional		no hope of
tremors	attention span	outburst		salvation
hypertension		loss of control		no faith in
tachycardia		devastation		Scripture
chest pain		inappropriate		
teeth grinding		action		
visual disturbance				
shock				

International Critical Incident Stress Foundation, 2001

Appendix B

SOUTHERN
ADVENTIST UNIVERSITY

P.O. Box 370
Collegedale
Tennessee 37315
423.236.2000
Fax 423.236.1000
E-mail: postmaster@southern.edu

March 19, 2007

Ms. Sandra Huggins
10010 Ooltewah-Georgetown Road
Ooltewah, TN 37363

Dear Ms. Huggins,

The Human Participants in Research Subcommittee has approved your research application entitled *"Critical Care Nurse Personality and Ways of Coping after a Critical Incident"*. The committee understands that you will study the personalities and the coping mechanisms developed by the critical care nurse. The volunteers will complete a personality questionnaire and stress intervention questionnaire.

It is our understanding that your dissertation research is being conducted through the School of Nursing, and the focus is to identify and correlate personality traits with coping skills. All data is to be kept in a secure location and properly disposed after the study is complete. The study is expected to be concluded by June 1, 2007.

Sincerely yours,

Linda Ann Foster, Ph.D.

Linda Ann Foster, Ph.D., Chair, Human Participants in Research Subcommittee
Professor, Biology Department
Southern Adventist University

Appendix C

Preliminary Factor Groupings of Stress Reduction Variables

Individual social	Group social	Nonsocial	Harmful/ addictive	spiritual	Passive activity	Active activity
talk to peer	role play	resign from job	drink	read the Bible	find ways to laugh	take vacation
seek help/ counseling	attend peer group session	cry extensively	use illicit drugs	help coworkers cope	receive massage	perform hobby
talk to therapist	attend grief session	isolate myself	do nothing different	pray/ meditate	watch TV	write in journal
talk to significant other	talk to family	take out frustration	binge eat	attend church	read book	keep very busy
seek intimate relations	attend debriefing session	sleep for long period	spend money	speak to church leader	eat comfort food	workout
call toll-free helpline		seek revenge	gamble	perform community service	listen to loud music	go hiking
			start smoking/ smoke more		listen to soothing music	use relaxation techniques
					listen to nature sounds	

Appendix D

Critical Care Nurse Personality and
Ways of Coping after a Critical Incident

On a daily basis, critical care nurses are exposed to a variety of stressful situations while practicing in critical care units. Some of these daily occupational stressors include pharmacy delivery and lab value reporting delays, endless phone calls from families, ventilator and equipment alarms, and unmet staffing needs. Over time, critical care nurses generally adapt to these stressors.

However, when a **critical incident** occurs in addition to these daily stressors, critical care nurses find themselves overwhelmed. Critical incidents include unexpected and unsuccessful CPR, verbal abuse and/or physical trauma sustained from a combative patient or family member, caring for a victim of a natural and manmade disaster, traumatic death, heated ethical dilemmas, family grieving, degrading arguments with physicians and colleagues, and needless exposure to infectious diseases.

The purpose of this study is to identify the personality traits of critical care nurses and distinguish coping methods and interventions they consider therapeutic for resolving critical incident stress. You are invited to participate in this research study. You will be asked to complete this brief questionnaire and provide information regarding your age, gender, race, region of residency, educational background, length of practice, and specialty area.

Your participation in this study is strictly voluntary. You may discontinue participation or refuse to answer any information contained in this study. Your identity in this study will be treated as confidential. Please complete this questionnaire brochure and deposit the brochure in the designated collection box. Contact information is provided below if you would like to receive information about the results of this study. **Thank you for your participation!**

Sandra Huggins, RN, BSN, CCRN
Southern Adventist University, P.O. Box 370
Collegedale, Tennessee 37315
sandrahuggins@southern.edu

Appendix E

Personality Questionnaire

MINI-MARKERS by Gerard Saucier

Please use this list of common human traits to describe yourself as accurately as possible. Describe yourself as you see yourself at present time, not as you wish to be in the future. Describe yourself as you are generally or typically, as compared with other persons you know
of the same sex and of roughly your same age. Before each trait, please write the number indicating how accurately that trait describes you, using the following rating scale:

1	2	3	4	5	6	7	8	9
Extremely Inaccurate	Very Inaccurate	Moderately Inaccurate	Slightly Inaccurate	Neither Inaccurate or Accurate	Slightly Accurate	Moderately Accurate	Very Accurate	Extremely Accurate

_____ Bashful   _____ Energetic   _____ Moody   _____ Systematic

_____ Bold   _____ Envious   _____ Organized   _____ Talkative

_____ Careless   _____ Extraverted   _____ Philosophical   _____ Temperamental

_____ Cold   _____ Fretful   _____ Practical   _____ Touchy

_____ Complex   _____ Harsh   _____ Quiet   _____ Uncreative

_____ Cooperative   _____ Imaginative   _____ Relaxed   _____ Unenvious

_____ Creative   _____ Inefficient   _____ Rude   _____ Unintellectual

_____ Deep   _____ Intellectual   _____ Shy   _____ Unsympathetic

_____ Disorganized   _____ Jealous   _____ Sloppy   _____ Warm

_____ Efficient   _____ Kind   _____ Sympathetic   _____ Withdrawn

Appendix F

Preferred Methods of Stress Reduction

Listed below are a variety of interventions and practices that may reduce the level of stress encountered after exposure to a critical incident (code 99, unsuccessful CPR, verbal abuse/physical trauma from combative patient, heated, degrading altercations, etc.). Consider each possibility as to how it would help you reduce your level of stress after a critical incident. Please rank each intervention/practice on a scale from 1 (**would never use for stress reduction**) to 5 (**would always use for stress reduction**). Make sure that you have entered a number response for each intervention/practice listed.

Never Use 1	Rarely Use 2	Occasionally Use 3	Frequently Use 4	Always Use 5

To reduce my stress level after a critical incident, I would:

_____ Talk to a peer/friend	_____ Eat comfort food	_____ Pray/meditate
_____ Take a vacation	_____ Keep very busy	_____ Listen to soothing music
_____ Drink alcohol	_____ Workout/exercise	_____ Attend a debriefing session
_____ Use illicit drugs	_____ Read the Bible	_____ Take out frustration on others
_____ Find ways to laugh	_____ Attend a peer group	_____ Talk to a therapist/psychologist
_____ Call a toll-free helpline	_____ Go hiking/walking	_____ Talk to my significant other
_____ Role play	_____ Resign from my job	_____ Listen to nature sounds
_____ Do nothing different	_____ Spend money	_____ Start smoking/smoke more
_____ Seek help/counseling	_____ Attend a grief session	_____ Attend a church activity
_____ Perform a hobby	_____ Gamble	_____ Speak to a church leader
_____ Write in a journal	_____ Talk to family	_____ Use relaxation techniques
_____ Receive a massage	_____ Cry extensively	_____ Perform a community service
_____ Watch TV/movies	_____ Help coworkers cope	_____ Sleep for a long period
_____ Read a book	_____ Listen to loud music	_____ Seek revenge
_____ Binge eat	_____ Isolate myself	_____ seek intimate sexual relations

OVER

Appendix G

Demographic Questionnaire

Questions are listed below that will be used as part of the research analysis. Information obtained from this survey, although not required, is very beneficial in describing the population represented in this study. **Please fill in the blanks with the most accurate information possible**:

Age: _____   State of residency: _____

Number of years worked in **nursing**: _____

Number of years worked in **critical care**: _____

Please circle the answer that best describes you:

Gender: M   F

Race: Caucasian   African-American   Asian   Hispanic

       Other: _____

Patient care area(s) in which you work:

   Critical Care   Emergent Care   Intermediate/Step-Down   Recovery/PACU

   Floor   Cath Lab   Surgery   Other: _____

Specialty area(s) in which you work:

Trauma   Burn   Medical   Surgical   Neuro   Cardiac   Peds   Educator

Neonatal · ER   Cardiac Surgical   Code Response Team   Other: _____

Employment status:

   Full-time   Part-time   PRN   Travel nurse   Weekend only

Highest level of nursing education received:

   Associate   Diploma   Baccalaureate   Master   Doctorate

Certifications (**Circle all that apply**):

   BLS   ACLS   CCRN   CCNS   CRNA   APN   APRN

   NP   PALS   ATLS   CEN   PCCN   Other: _____

Level of expertise:

   Beginner   Intermediate   Expert   Advanced Practice

'Iftis concludes the research study. ONCE AGAIN...THANK YOU FOR PARTICIPATING!!!

Appendix H

Five Patterns of Coping

Relax	Spiritual	Consolation	Counsel	Talk
take a vacation	drink alcohol *	watch TV/movies	call a toll-free hotline	talk to a peer
perform a hobby	read the Bible	binge eat	role play	find ways to laugh
write in a journal	pray/meditate	eat comfort foods	seek help/ counseling	talk to family
receive a massage	attend a church activity	spend money	attend a peer group	help coworkers cope
read a book	speak to church leader	cry extensively	attend a grief session	talk to significant other
workout/ exercise		listen to loud music	attend a debriefing session	
go hiking/ walking		isolate myself	talk to a therapist	
listen to soothing music		take out frustration on others		
listen to nature sounds		sleep for a long period		
use relaxation techniques		seek revenge		
perform a community service				

*negative correlation