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COPING STRATEGIES OF NEUROLOGY NURSES WHO EXPERIENCE VERBAL AND PHYSICAL ABUSE FROM PATIENT AND FAMILIES

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COPING STRATEGIES OF NEUROLOGY NURSES WHO EXPERIENCE VERBAL AND PHYSICAL ABUSE FROM PATIENTS AND FAMILIES

By

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Dedication

To my Dad who always knew the value of an education.

You were right about everything!

To Peppy whose example as a professor set the stage for

my own dreams of becoming and educator.

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Coping Strategies of Neurology Nurses who Experience Verbal and Physical Abuse from Patients and Families

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The purpose of the study was to assess the incidence, intensity, and impact of verbal and physical abuse experienced by neurology nurses from patients and families, identify current coping strategies of neurology nurses, and explore the relationships between selected demographic characteristics, high and low abuse from patients and families and coping strategies.

A descriptive, exploratory research design utilizing an anonymous online survey was used for this study. The sample consisted of registered nurses living in the United States currently employed full or part-time in direct care roles with neurology patients.

A total of 112 participants were recruited from three sources: 1) a contact population of 5000 neurology nurses via email using purposive sampling design techniques through an online database service specializing in healthcare marketing and research, 2) three metropolitan hospitals with full IRB reviews and 2) invitations submitted to nursing directors at local and regional hospitals.

Data was analyzed using descriptive statistics, tests of differences (analyses of covariance), and correlation (Pearson's and Spearman's rho and partial correlations). A statistical significance of $\partial \leq .05$ was the standard used for this research.

Results indicated the presence of verbal and physical abuse against neurology nurses, identified coping strategies utilized, predictors of PTSD symptomatology, differences in genders on types of violence and the effects of verbal and physical abuse on coping strategy utilization.

The findings of the study enriches the current literature by confirming the occurrence of verbal and physical abuse against neurology nurses, as well as contributing new data on intensity, impact and coping strategies of neurology nursing as it relates to verbal and physical abuse by patients and families.

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List of Abbreviations

UTMB	University of Texas Medical Branch
GSBS	Graduate School of Biomedical Science
TDC	Thesis and Dissertation Coordinator
VPAIIS	Verbal and Physical Abuse Incidence and Intensity Scale
IES-R	Impact of Events Scale - Revised

Chapter 1: Introduction

PROBLEM STATEMENT

This dissertation is organized into five chapters, a reference list, and appendices. Chapter One introduces the study and describes the problem, purpose, and significance of the study. It discusses the theoretical framework, defines the relevant variables, specific aim and related research questions and gives a brief overview of the design. Chapter Two presents a review of the related literature dealing with historical abuse against the nurse, verbal and physical abuse of nurses, primary sources of nurse abuse, coping with stress and abuse by nurses and neurology nursing population and abuse. Chapter Three describes the study's research design and methodology of the study, including data collection procedures, sampling, and data analysis. Chapter Four provides the study findings. Chapter Five presents the discussion section with a synthesis of the research findings and the current literature as well as conclusions and recommendations for future research.

Verbal and physical abuse against nurses is a growing problem (Campbell et al., 2011). The current literature reveals that violence against nurses is one of the more current topics being explored by nurse researchers today. The identification of patients and families as two primary sources of verbal and physical abuse against nurses has been a persistent finding (Celik et al., 2007). Patients and families represent two groups that the nurse has the most direct contact with in the clinical environment. Therefore, a higher risk of conflict resulting in verbal and physical abuse exists. Of the nurse populations previously studied, emergency and psychiatric nurses are most commonly represented

while research on the neurology nurse population is practically non-existent. Current literature on neuroscience nurses caring for aggressive brain injured patients supports the existence of nurse abuse by the patient, but is insufficient in its scope. The neurology nurse faces workplace aggression which ranges from minor to severe physical injuries, temporary or permanent physical disability, psychological trauma, or death (Finfgeld-Connett, 2009). Coping with this violence is often difficult for the nurse because of the lack of support in most clinical environments. The exploration of the registered nurse coping with verbal and physical abuse from patients and families is discussed in the literature, but once again primarily within the emergency and psychiatric nurse specialties. Gates et al., (2011) determined that nurses are often not afforded the opportunity to examine the coping strategy they use in abusive situations with patients and families. Coping becomes an important caveat for the nurse struggling to maintain a professional, healing practice with verbally or physically abusive patients and families and therefore warrants a more extensive examination. Consequently, coping strategies of neurology nurses experiencing verbal and physical abuse from patients and families represents a significant gap in the literature and nursing science.

BACKGROUND

The current literature primarily examines topics related to verbal and physical abuse of emergency and psychiatric nurse populations with a few studies focused on the management of aggressive brain injured neuroscience patients and stress and coping of critical care and emergency medicine nurses.

Abuse in the workplace is a common reality for nurses working in direct patient care roles around the world and in the United States. Abuse against the healthcare

worker, primarily the nurse, has been on the forefront of nursing research for many years. The effects and consequences of abuses against nurses are significant and can be devastating and long-term. Incidents of aggression and abuse towards nurses have been both physical and verbal. Historically, between 35% and 80% of healthcare workers have been physically assaulted at least once (Madden et al., 1976; Kinross 1992; Lanza 1996; Shepherd 1996; Whitehorn et al., 1997), and between 60% and 91% of nurses have experienced both verbal and physical abuse (Celik et al., 2007). Nurses from the field of emergency medicine have been surveyed regarding violence in the workplace and findings indicate a pervasive presence of violence and abuse against the very people giving care to their abusers. Gillespie et al., (2013) reported physical abuse of emergency nurses by patients during the commission of their nursing practice (i.e. starting an intravenous line, inserting an indwelling urinary catheter, and triage assessment). Emergency nurses considered the nurse attitude and behavior as important factors related to the risk of abuse (Pich et al., 2010). For example, a respectful and confident approach with a patient often reduces the abuse risk, while an aggressive and brusque approach can frequently lead to some form of verbal or physical abuse by the patient or family member (Levin et al., 1998). There is overwhelming data to support the prevalence of patient and family abuse of nurses in emergency departments in the United States and around the world, but the emergency department is not the only area where nurses are abused by patients and families. Abuse against the psychiatric nurse is also prominent in the nursing literature and demonstrates that abuse against the nurse exists in various clinical environments.

The predominate source of abuse for the psychiatric nurse population, as determined by Merecz et al. (2006), was determined to be the patient. The primary nurse experiences a higher level of psychological and physical aggression and abuse than non-primary care givers. Not only did Merecz et al. (2006) determine that greater than 40% of primary nurses experienced screaming, threats and vulgar behavior but the frequency of the abuse, occurring weekly, was greater than that of the non-primary caregivers. In another study by O'Connell et al. (2000), patients followed by relatives were identified as the primary perpetrators of violence against psychiatric nurses.

Although emergency and psychiatric nursing populations are reported more frequently in the nursing literature, other nursing populations experience verbal and physical abuse from patient and families as well. Campbell (2011) reported 19.9% verbal abuse prevalence among RNs working in four health care institutions in one U.S. metropolitan area. Twenty percent of nurses in US EDs report incidences of verbal abuse (Gacki-Smith et al., 2009). Eighty-two percent of nurses from various Australian clinical settings have identified verbal abuse as the most common type of abuse (Pich et al., 2010, Farrell et al., 2006). Eighty-two percent of pediatric nurses from one U.S. study reported verbal abuse an average of four times a month (Truman et al., 2013) and neurology nurses from one study report a 43.8% verbal abuse rate (Visscher et al., 2011). The neurology nurse population is vastly underrepresented in the nursing literature with regards to abuse from patients and families. The one study mentioned is based in part, on statistics from a neuro-rehab unit and illustrates proof of the existence of abuse but is lacking in its scope. These statistics demonstrate that abuse against the nurse is currently and has historically been a significant problem, but with the escalation of violence around

the world and in the United States, coupled with the unpredictability of patient and family aggression, nursing continues to endure abuse by patients and families in the clinical environment.

SIGNIFICANCE

Nurses who face verbal and physical abuse encounters by patients and families in the clinical environment characteristically attempt to manage the situation but in many cases they are not equipped to handle their emotions and responses to abusive acts against them. Most nurses do not possess the experience or education necessary to deal with aggressively abusive patients and families. Many nurses use strategies that only temporarily alleviate the volatile situation, but do not resolve the underlying problem, which eventually results in abusive acts toward the nurse and leaves the nurse to cope with the consequences of the abusive act.

Neurology nurses coping with patient and family abuse have yet to be discussed in the literature although evidence shows that all nurses, including neurology nurses, care for aggressive, abusive patients and families. No studies to date have addressed *coping strategies* of neurology nurses experiencing verbal and physical abuse from patients and families.

THEORETICAL FRAMEWORK

The *Ecological Occupational Health Model of Workplace Assault (EOHMWA)* was the theoretical framework guiding this study (Figure 1.1). Developed by Levin et al. (2003), the EOHMWA model is broad-based and has four phases. Phase 1 represents the contributing factors to workplace violence and phase 2 represents detailed information

about each factor in phase 1. Data collection for this study is based on the combined structure of phase 1 and 2 (see Figure 1). The four concepts developed by Levin et al. (2003) indicate that the individual worker, the workplace, the external environment, and the assault situation all contribute to the likelihood of assault. Aspects of each concept measured for this study are: 1) personal worker factors (demographic characteristics, years of neurology nursing experience and years of nursing experience collected by the Bio-demographic Survey) and coping methods (Brief COPE Inventory); 2) workplace factors (the neuroscience clinical setting); and 3) environmental factors (identifies the persons (i.e., patient or family) enacting the physical violence against neurology nurses). These three dimensions contribute to the assault situation which includes type, (i.e., verbal or physical abuse), frequency and intensity of the assault collected by the Verbal & Physical Abuse Incidence and Intensity Scale (VPAIIS) and the Impact of Events Scale – Revised (IES-R).

There are six underlying assumptions of the EOHMWA of which assumptions 1-5 apply to this study and include:

1) The work environment is a complex and inter-dynamic ecological system.
2) The individual worker, the community (external environment) and the workplace contribute to the possibility of workplace violent acts.
3) The worker, workplace, and environment are interrelated.
4) Both verbal and physical assaults are considered violent acts.
5) Lack of reporting of violent acts hinders prevention efforts.
6) Interventions (e.g. workplace design, policy, training programs, direct care) can be put in place both before and after an assault situation occurs to reduce the consequences of the assault on the worker (in this case the neurology nurse), the workplace and on patient care.

While the Ecological Occupational Health Model of Workplace Assault highlights the fact that the health sector can effectively implement violence prevention and response programming, it will have to consider all of the factors that contribute to

workplace violence. Assaults adversely affect the quality of patient care directly through reduction in services, and indirectly through absenteeism, attrition, and decreased morale (Levin et al., 2003). By structuring this study on the four concepts of phase 1 and 2 of the Ecological Occupational Health Model of Workplace Assault, this initial phase of investigation will allow the primary investigator (PI) to consider the factors contributing to verbal and physical abuse against neurology nurses from patients and families and how they currently cope with this abuse.

Figure 1.1: Ecological Occupational Health Model of Workplace Assault

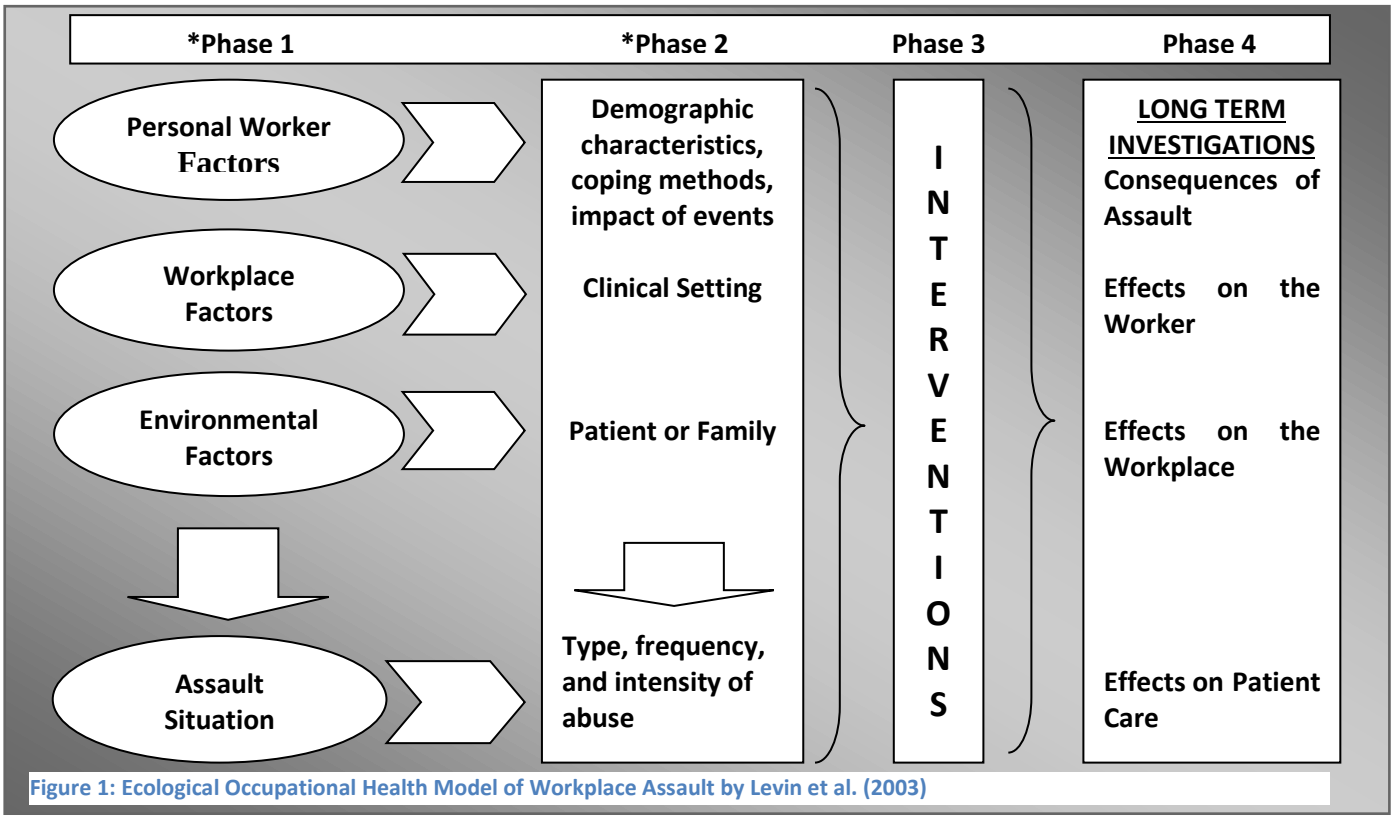


Figure 1: Ecological Occupational Health Model of Workplace Assault by Levin et al. (2003)

DEFINITION OF TERMS AND VARIABLES

Coping is defined by Hays et al. (2006) as, "the cognitive and behavioral efforts exerted to manage external and/or internal demands, which were perceived as taxing to

an individual" (p. 185). Three global classifications of coping strategies (Avoidance coping = self-distraction + denial + substance use + behavioral disengagement + acceptance + self-blame; Task coping = active coping + planning + humor + positive reframing; and Social/Emotional coping = use of emotional support + use of instrumental support + venting + religion) were used for this study and were the dependent variables. Coping strategy classifications was measured using the Brief Cope Inventory.

Chapman et al. (2006) define *verbal abuse* as, "any communication that attacks a person professionally or personally; it may refer to behaviors such as yelling, verbal insults, or threats of harm" (p. 247). Patient and family verbal and physical abuse incidence and intensity and Impact of Events (IES-R) subscales (Avoidance, Intrusion, Hyperarousal Total scores), Total Impact of Events-Revised (Total IES -R), and PTSD Symptomology (IES-R criterion split) were also dependent variables. For the purposes of this study, *incidence* was defined as the frequency of an event during a six month period of time and *intensity* was defined as symptom severity of a cumulative evaluation over a six month period of time. *Impact* was defined as the effect of an event on someone or something. Incidence and intensity of verbal and physical abuse and impact of verbal and physical abuse was collected as both interval data (counts or scores) as well as dichotomized into high and low categories using mean and median splits for VPAIIS factors and a criterion split for the impact factor. Since it was unknown whether mean and median measures of central tendency would substantially vary, both approaches were explored and used in analyses if substantially different as they would reflect different sample distributions along high versus low dimensions.

PURPOSE AND GOALS

The purpose of the study was to assess the incidence, intensity and impact of verbal and physical abuse experienced by neurology nurses from patients and families, identify current coping strategies of neurology nurses, and explore the relationships between selected demographic characteristics and current coping strategies. The risk of verbal and physical abuse from patients and families experienced by neurology nurses poses a significant problem and is quickly becoming one of the more important topics requiring immediate action in nursing today. The Specific Aims and corresponding research questions developed to assess the problems identified for this study were:

AIM 1: To assess the incidence, intensity and impact of verbal and physical abuse experienced by neurology nurses from patients and families.

RQ 1.1 What is the incidence of verbal and physical abuse experience by neurology nurses from patients and families?

RQ 1.2 What is the intensity of verbal and physical abuse experienced by neurology nurses from patients and families?

RQ 1.3 What is the global impact of verbal and physical abuse experience by neurology nurses from patients and families?

AIM 2: To explore the relationships between the three global coping scales, Avoidance, Task, and Social/Emotional coping, the incidence and intensity of experienced physical and verbal abuse (from patients and families separately), global measures of impact (IES-Avoidance, Intrusion, Hyperarousal subscales, and IES Total Score) and selected demographic characteristics.

RQ 2.1 What is the relationship between years of neurology experience and age with the Avoidance, Task, and Social/Emotional coping scales from the Brief COPE, the incidence and intensity of experienced physical and verbal abuse from patients and families separately as measured by the Verbal and Physical Abuse Incidence and Intensity Scale (VPAIIS), and global measures of impact from the Impact of Events Scale – Revised (IES-R) (IES-Avoidance, Intrusion, Hyperarousal subscales, and Total Score)?

RQ 2.2 What is the relationship between the coping strategies (Avoidance, Task, and Social/Emotional coping), the incidence and intensity of experienced physical and verbal abuse from patients and families separately and global measures of impact (IES-Avoidance, Intrusion, Hyperarousal, and Total Score) controlled for years of neurology experience and age?

RQ 2.3 What is the best set of predictors of global impact (IES Total Score) among coping strategies (Avoidance, Task, and Social/Emotional coping), the incidence and intensity of experienced physical and verbal abuse from patients and families separately and demographic variables (gender, years of neurology experience and age)?

RQ 2.4 What is the best set of predictors of risk of high PTSD symptomatology (Total Score>/= 33) among coping strategies (Avoidance, Task, and Social/Emotional coping), the incidence and intensity of experienced physical and verbal abuse from patients and families and demographic variables (gender, years of neurology experience and age)?

AIM 3: To evaluate coping strategies utilized by neurology nurses experiencing high versus low verbal and physical abuse from both patients and families separately across selected demographic characteristics.

RQ 3.1 What are the differences on Avoidance, Task and Social/Emotional coping as measured by the Brief COPE Inventory between gender controlling for age and years of neurology experience?

RQ 3.2 What are the differences in Avoidance, Task, and Social/Emotional coping, used by neurology nurses experiencing high versus low incidence and intensity of verbal and physical abuse from patients and families separately and high and low global impact controlling for age and years of neurology experience and gender?

The study examined the incidence, intensity, and impact of verbal and physical abuse experienced by neurology nurses from patients and families, identifies current coping strategies of neurology nurses, and explored the relationships between selected demographic characteristics, high and low abuse from patients and families and coping strategies. Study findings may be meaningful to neurology nurses, patients and families because it seeks to establish neurology nurses as a vulnerable population that experiences violence from patients and families. The findings of the present study should contribute an enhanced understanding and improved knowledge of the verbal and physical abuse experienced by neurology nurses from patients and families, the current coping strategies of neurology nurses, the relationships between these important characteristics and a new perspective which may eventually help educate nurses in other fields.

CHAPTER 2: REVIEW OF LITERATURE

INTRODUCTION

History has shown that assaults against healthcare workers are becoming a common occurrence and hospitals in general are frequently unsafe places to work (Lipscomb et al, 1992, Rosenthal et al., 1992, Dickson et al., 1993, Levin et al., 1998, Atawneh et al., 2003, Chapman et al., 2006, Campbell et al., 2011, Ahmed, 2012, Khademloo et al., 2013, Speroni et al., 2014). Violent attacks against hospital workers merit immediate attention to prevent more violent attacks from occurring. The consequences of assault are long-term and can include to flashbacks, sleeplessness, depression and fearfulness (Atawneh et al., 2003). Although studied for more than fifty years, it was not until the 1990's that workplace assault of healthcare workers started to receive serious attention; however only in the most serious of physical assault cases (Rippon, 2000). Assaults against the nurse have become one central aspect of research in healthcare related abuse cases and a predominant focus of many recent research studies. Based on the close proximity to and interaction of the nurse with the patient and family, it has become quite obvious that nurses are one of the most vulnerable populations in the healthcare organization.

The purpose of this chapter is to present a brief review and critique of research studies that have explored abuse against nurses, verbal and physical abuse by patients and families, coping strategies of abused nurses, abuse overviews of the neurology nurse population and the ethical considerations herein.

ABUSE AGAINST NURSES

One important reality for nurses working in the clinical environment is the ever present possibility of abuse on the job. It is not the first thing that comes to mind when deciding to become a nurse, but the fact is nurses work more closely with patients and families than any other medical professional. This proximity to the patient and family puts the nurse at considerable risk for abuse. Workplace violence in the form of verbal and physical abuse is a serious occupational risk and is becoming a common occurrence for many nurses around the world. Among healthcare workers, nurses are frequently at the most risk of all types of abuses (Celik et al., 2007). Caring for sick patients and dealing with disruptive family members who do not understand the process or have any knowledge regarding the number of patients treated by the nurse creates, in many cases, a volatile situation that often leads to confrontation and subsequent abuse. Celik et al., (2007) reported that abuse is on the rise against healthcare workers, especially nurses, as hospitals become more overcrowded and patients and families are forced to wait for treatment in many emergency departments and inpatient settings.

The US Department of Justice has been tracking workplace violence since 1973. The most current National Crime Victimization Survey (2005 – 2009) found that the average annual rate for non-fatal violent crime against nurses was 8.1 per 1000 compared to 5.1 per 1000 for all occupations and nurses are identified as having the highest percentage of workplace violence of all medical professions (US Department of Justice, 2011). The report also confirmed that "visitors committed the greatest percentage of nonfatal violence against males (53%) and females (41%) during the same time period" (US Department of Justice, 2011, p.4). Multiple studies also reported that between 60%

and 91% of nurses have experienced both verbal and physical abuse (Cox, 1987; Whitehorn et al., 1997; Rippon, 2000; Celik et al., 2007; Pich et al., 2010). Nurses working with acutely ill patients are keenly aware of the frustrations experienced by the patient and families. Their daily lives and routines are severely interrupted and when illness affects the patient and family over a longer period of time than initially expected, anxiety turns to anger and then often manifests itself in verbal and physical exchanges.

A workplace of violence creates stress and anxiety for an otherwise overworked nurse who serves as primary caregiver and overall patient advocate, but may also be required to serve as a security officer, social worker, family mediator or counselor. This can be an overwhelming position to be in, particularly when the patient is acutely ill. The impact of verbal and physical abuse against nurses can cause long term side effects for many nurses. In one research study of 230 emergency department nurses, 94% were found to experience at least one post-traumatic stress disorder symptoms after an abusive event. Seventeen percent had scores high enough to be considered probable for PTSD. The results also showed an indirect relationship to stress levels and work productivity (Gates et al., 2006). Thus, as the evidence shows, the effects of abuse against nurses can ultimately affect the level of patient care provided and increased stress levels can affect personal and professional relationships for the abused nurse. Because nurses are considered to be a vulnerable population due to the close proximity to patients and families they are the primary focus of this research study.

VERBAL ABUSE

Verbal abuse is one of the most common types of abuse against the bedside nurse. Verbal abuse is easily overlooked as a perceptible threat by many nurses because it is

such a common occurrence. Over time many nurses realize that the abuse can later manifest itself as feelings of fear and anxiety while causing sleeplessness, resentment and anger towards peers, patients and family visitors. Chapman et al. (2006) defines verbal abuse as, "any communication that attacks a person professionally or personally; it may refer to behaviors such as yelling, verbal insults, or threats of harm" (p. 247). Current research literature exposes the prevalence of verbal abuse against nurses in U.S. hospitals and hospitals around the world.

One study by Farrell et al. (2006) reported 82% of nurses from Australian clinical settings have experienced rude behavior. Specifically, the Australian nurses experienced 68% shouting, 61.9% swearing, 26.3% threats of harm from patients and families and all participants identified verbal abuse as the most common type of abuse. Khademloo et al., (2013) examined verbal abuse in five Northern Iranian hospitals using a cross-sectional survey study. The sample of 271 nurses composed of 193 females and 78 males revealed that 260 (95.9%) had experienced some form of verbal abuse from patients and families. A descriptive study of verbal abuse against nurses in Turkey was reported by Oztunc (2006) using a questionnaire. Of the 290 nurses participating in the study, 233 (80.3%) reported experiencing verbal abuse from patients and families. A second study of Turkish nurses by Celik et al., (2007) revealed very similar results. A sample of 622 nurses working in eight hospitals was surveyed on the prevalence of verbal and physical abuse. Results showed that 457 (80.6%) of the nurses experienced verbal abuse and 567 (91.1%) had experienced both verbal and physical abuse from patients and their families with verbal abuse identified as the most frequent form of abuse from patients and their families. Abuse against Jordanian nurses was studied by Ahmed (2012) in three hospitals

in Amman. A descriptive cross-sectional survey study of 447 nurses found that 166 (37.1%) experienced verbal abuse and patients and their families were the most frequent abusers. Finally, in an observational study of 57 patients in one hospital in the Netherlands using the Staff Observation Aggression Scale-Revised, neurology nurses reported a 43.8% verbal abuse rate from patients with acute brain injury (Visscher et al., 2011). Examination of the evidence of abuse against nurses in foreign countries has shown that the problem exists and continues to be a major problem for nurses working abroad.

Verbal abuse against nurses occurs in U.S. hospitals on a daily basis regardless of clinical setting. Nursing research has focused primarily on emergency and psychiatric clinical settings with only a few studies exploring the neurology clinical setting. However, this does not diminish the importance of the data and it only supports the notion that under-researched clinical environments, such as neurology, must be represented in the nursing literature. Verbal abuse termed as psychological abuse prevalence reported by Campbell (2011) among 2166 registered nurses working in four health care institutions in one U.S. metropolitan area was 19.9%. In one noteworthy study by Gacki-Smith (2009), 3465 members of the Emergency Nurses Association participated in a cross-sectional study by completing a 69-item survey. Results revealed that >70% of registered nurses experienced some form of verbal abuse from patients and family members. Another 20% reported experiencing verbal abuse more than 200 times over the same three year period. Verbal abuse is not only prevalent in adult acute care settings but also in pediatric U.S. hospitals. In a mixed methods study of 162 pediatric nurses by Truman et al., (2013), 82% reported verbal abuse an average of four times per

month. Verbal abuse termed non-physical abuse in a large survey based study by Gerberich et al., (2004) of 4918 registered nurses and licensed practical nurses from across the state of Minnesota revealed a 38.8% verbal abuse rate.

Verbal abuse of nurses in U.S. and foreign hospitals is now and has been a serious situation needing swift and decisive action. Determining the incidence, intensity, impact and coping strategies of nurses in neurology clinical settings will add to the overwhelming evidence of verbal abuse against nurses. Verbal abuse by patients and families commonly occurs following a stressful situation and is thought to be a defense mechanism for coping with stress. Verbal abuse aimed at nurses is just one aspect of abuse that nurses face on a daily basis. If issues causing the verbal abuse are left unattended, the verbal abuse tends to escalate to something more aggressive, usually in the form of some physical attack.

PHYSICAL ABUSE

Physical abuse against nurses in various clinical settings is also becoming a common occurrence in hospitals around the world. Physical abuse is defined by the primary investigator as, "the deliberate, malicious use of physical strength for the intentional purpose of delivering harm to another individual in the form of spitting, punching, shoving, kicking, biting, scratching, stabbing or shooting the intended victim" (Trahan, 2014, p. 3). Physical abuse of nurses by patients and families in clinical areas such as the emergency department, intensive care unit, and psychiatric unit has been studied extensively in nursing literature from different countries. Although the physical abuse of nurses tends to happen less often than verbal abuse, the consequences tend to linger longer and are more pronounced. One U.S. study of emergency nurses by Gates et

al., (2011) using the Impact of Events Scale - Revised showed that 94% of ED nurses experienced a minimum of one post-traumatic stress disorder symptom after being the victim of a violent event. Of this group, 17% had scores indicative of a possible PTSD diagnosis. The long term effect of physical abuse for nurses can result in chronic physical injuries, pain, disability, muscle tension and even various psychological effects, such as those associated with verbal abuse (feelings of fear and anxiety, sleeplessness, resentment and anger towards peers, patients and family visitors). Reported violence against nurses encompasses many cultures and is evidence of the similar nature of humans in hospital clinical settings around the world.

One cross-sectional survey study of 446 nurses by Merecz et al., (2006) reported a physical abuse rate greater than 79% in psychiatric, neurology, surgical, emergency, pediatric, and cardiology hospital wards in facilities in one district of Lodz, Poland. This evidence lends credence to the notion that violence against nurses occurs in some form in all different specialty areas of nursing. A study by Visscher et al., (2011) examining the aggression of neuropsychiatric patients with acquired brain injury (ABI) in a specialty unit in one Netherlands hospital disclosed that 42% of patients had exhibited aggressive behavior on one or more occasions. Aggression, exhibited by patients with ABI often results in uncontrollable physical abuse towards the nurse. This creates a concern for neurology nurses caring for this patient population. Nurses caring for patients in Turkey reported a 33% physical abuse rate in a questionnaire study by Celik et al. (2007). The Turkish nurses reported experiencing threats of physical harm (19.5%) or experiencing some form of physical abuse (8.8%). Atawneh et al. (2003) conducted a survey study of 81 emergency department nurses from Kuwait who reported a 6% overall physical attack

rate. An estimated 719 total incidents were reported by the Kuwaiti nurses and several of the incidents are reported as follows: threatened to hit (60 times); threw something at the nurse (33 times); pushed or grabbed (13 times); slapped (5 times) (Atawneh et al., 2003). As the type of physical abuse is revealed, it becomes easier to understand the true threat to nursing that exists in various clinical settings. A cross-sectional descriptive study by Ahmed (2012) of 447 Jordanian nurses revealed an 18.3% physical abuse rate. The most frequently reported types of physical abuse were pushing (24.4%) and hitting (14.6%). These studies of physical abuse of nurses working in foreign countries demonstrate the disrespect, humiliation and fear experienced by the very people trying to care for and heal the sick and dying.

Physical abuse of nurses is just as prevalent in the US as abroad and studies have shown that nurses are just as vulnerable to physical attack. Gacki-Smith et al. (2009) performed a cross-sectional study of 3,465 emergency nurses across the U.S. and found that >25% had reported being physically abused more than 20 times over a three year period. The nurses also reported that some of the most common types of physical abuse experienced by more than 50% of the nurses was being "spit on", "hit", "pushed/shoved", "scratched" and "kicked" (Gacki-Smith et al., 2009). Gillespie et al. (2013) performed a qualitative descriptive study to describe incidents of physical violence against nurses working in U.S. hospitals. Descriptions of physical assaults, verbal threats of physical violence and intimidation by patients towards the nurse were found to be some of the more alarming aspects of data collected. One nurse described the following assault situation: "He became increasingly agitated and verbally abusive towards his primary nurses. His agitation escalated to ripping out the call light system…ripping down the

curtains…breaking the plexi-glass-face on the wall and used the plexi-glass pieces to threaten staff" (Gillespie et al., 2013, p. 7). Another nurse described verbal threats as follows: "She looked at me in a way that frightened me and stated, "I never forget a face, and if it kills me, I'm gonna hunt you down and make you pay…You and your family will pay. Remember I know where to find you." And a third nurse account relayed the following situation: "He was walking off, stating he would just get a gun, return and just shoot everyone on duty….I heard him state that he would just wait outside in the parking lot or in the street to catch staff going off duty and shoot them" (Gillespie et al., 2013, p. 7). Four themes, personal worker factors, workplace factors, aggressor factors and assault situation, emerged from the data and were based on the Ecological Occupational Health Model of Workplace Assault (Gillespie et al., 2013). The assault descriptions above by nurses working in U.S. emergency departments sheds light on the volatile and complicated nature of the nurse patient relationship.

Physical abuse of U.S. and foreign nurses exists in many forms as evidenced by the current literature. The prevalence rate ranges from 8.8% to more than 79% depending on the country and the hospital. The average physical abuse rate found in the current literature reviewed for nurses working in U.S. and foreign hospitals is greater than 27%. Given that the literature also establishes the existence of PTSD symptoms after the physical abuse of nurses it is the responsibility of nursing researchers to evaluate the incidence and impact of verbal and physical abuse of nurses from all specialty patient care areas. Neurology nurses are one such vulnerable population being examined here along with the incidence and impact of the verbal and physical abuse. Additionally, we

must identify the most common nurse abusers and discuss why these abusers are believed to so easily commit these acts of verbal and physical abuse.

PATIENT AND FAMILY ABUSERS

While it is imperative that we, as nursing educators and clinicians, understand the incidence, intensity, and impact of verbal and physical abuse, it is essential that the sources and reasons for the abuse are identified and examined through evidence base research. Although studies vary, verbal and physical abuse by patients and families against nurses have been identified as two of the more common sources of abuse in the clinical environment (Celik et al., 2007). Abuse of nurses by patients and families in U.S. and foreign hospital is documented in multiple research studies found in the current nursing literature. The following evidence based research represents an overwhelming array of evidence identifying patients and families as the most common perpetrators of verbal and physical abuse against the nurse.

A mixed methods study in an urban children's hospital in Kentucky reported patients and families as frequent sources of nurse abuse (Truman et al., 2013). In response to one of the primary research questions in Truman et al. (2013) which asked, "How often do nurses practicing in a pediatric hospital encounter verbal abuse by patients and families?", the median response was two times per month with 57.4% reporting 1-3 instances per month. Evidence presented by Khademloo et al. (2013) from a cross-sectional survey of Iranian nurses revealed that member(s) of the patients' family and patients were responsible for the most frequent verbal (53.4%, 30.3%) and physical abuses (55.6%, 44.3%) of nurses respectively. The types of verbal and physical abuse by source was examined by Ahmed (2012) and reported in a study of Jordanian hospital

nurses. The most frequent verbal abusers reported were patient's relatives (39.6%) and patients (20.1%) but the most frequent physical abusers were found to be patients (11.7%) followed by patients' relatives (11.2%). Ahmed (2012) also found that the most frequently experienced type of verbal abuse and physical abuse for both patients and their families was being shouted at (57.6%) and being pushed (23.2%) respectively. Campbell et al. (2001) collected data from an online cross-sectional survey of 2166 nurses working across four U.S. healthcare institutions found that physical abuse by the patient (90.2%) or a patient's relative (27%) and psychological or verbal abuse by the patient (54%) or a patient's relative (32.8%) were the most common perpetrators of abuse against the nurses. Celik et al. (2007) found that Turkish nurses who were verbally abused were abused most often by their colleagues (80.6%), followed closely by patients (76.9%) and physicians (73%). However, when the nurses reported being physically abused Celik et al. (2007) found patients' relatives (70.2%) and patients (61.5%) were the most frequent sources of abuse. Australian nurses reported in a study by Farrell et al. (2006) that the patient (74.3%, 97.2%) and the patients' visitor (35.3%, 7.1%) were the top two verbal and physical abusers respectively of nurses. In another study of verbal abuse of Turkish nurses by Oztunc (2006), patients' relatives (572%) and patients (37.9%) were found to be the primary abusers of nurses working in various clinical settings in a public hospital. A targeted study of all registered (n = 57,388) and licensed practical (n = 21,740) nurses working in Minnesota by Gerberich et al. (2004) reported physical abuse by the patient (96.8%), verbal abuse by the patient (67.2%), doctor (12.8%) and patients' visitor (11%) as the most frequent perpetrators nursing abuse. A descriptive correlational study by Sofield et al. (2003) of 465 staff nurses and administrative nurses from three Northeast

U.S. metropolitan suburban hospitals found patients (56%) and patient families (48%) to be among the most frequent sources of abuse towards nurses. Of these verbal abusers, male patients and/or family members (61%) were identified as the most verbally abusive of the perpetrators (Sofield et al., 2003). The overwhelming statistical evidence makes it difficult to deny the importance of examining the patients and families role in the abuse of nurses around the world. Examining why patients and families are identified over and over again as the primary perpetrators of abuse is also an import aspect of this research.

Because of the close proximity to the nurse, the stress of the situation, overcrowding, and enforcement of hospital visitation restrictions, many patients and family visitors feel they have no control and tend to lash out in abusive ways at the nurse. Nurses have expressed feelings of resentment towards patients and families they felt were pre-meditated in their physical abuse (Soreny, 2009). Contributing factors to abuse against the Jordanian nurse population by patients and families by Ahmed (2012) suggested that the abuse pertained primarily to the negative societal image of nurses (64%), poor support from higher authority (60%), nursing shortage (56.5%), lack of time and increased work load (51%), patients' physical and emotional condition (33.4%), fear and anxiety of patients' relatives (30.6%), high hospital costs (27%), lack of security (24%), lack of communication skills of nursing staff (18.7%), lack of competency of the nurse (15%) and improper or incomplete information given to patients (14.8%) (Ahmed, 2012). One caution is that some of these contributing factor are based on cultural opinions from a Jordanian nursing population and may not apply to all situations, particularly in the U.S., but we should also be aware of the diversity of our patient population in large metropolitan cities, many of which experience a vast array of

international patients with differing cultures and religions which affect how patient care is delivered and received.

The overall image of nurses in the U.S. is generally one of respect and trust. Americans have named nurses (82%) the most trusted professions in the most recent gallop poll from December 2013 (Gallop, 2013). One research study by Duxbury et al. (2005) on causes and management of patient aggression and violence with a patient and staff perspective indicated that patients may become abusive towards nurses because the patients perceived a restrictive environment, poor conditions and poor communication. The nurses believed that other people made patients aggressive and as well as staff not listening to the patient were precursors to abusive incidents against the nurse (Duxbury et al., 2005).

One explanation for neurology patients' verbal or physical abuse is a head injury or dementia diagnosis. However, an explanation for the family members' reason for verbal and physical abuse of a nurse is not as readily understood. Adult family members of neurology patients should be held accountable for their actions. Sofield et al. (2003) believe that causes of verbal and physical abuse by family members toward nurses could be associated with the high stress conditions and the authority differences or imbalances that exist between the nurse and the family. It has been acknowledged that the attitude, behavior, and skill level of the nurse affects how patients and family members react when rules are enforced during stressful situations (Chapman et al., 2006). This observation has led to scrutiny of one of the more important aspects of clinical nursing which is coping with and deescalates a verbally or physically abusive patient or family member.

COPING AND THE IMPACT OF ABUSE

Coping with abusive situations usually takes experience dealing with difficult patients and families. Many nurses use coping mechanisms that temporarily alleviate volatile situations but do not resolve the underlying problem eventually resulting in violent acts toward the nurse. Hays et al. (2006) define coping as, "the cognitive and behavioral efforts exerted to manage external and/or internal demands, which were perceived as taxing to an individual" (p. 185). Employees, employers, patients, and families are all affected by abuse in the clinical environment. Healthcare workers, who experience abuse from patients and families, often suffer physical injury, muscle tension, chronic pain, and psychological issues such as loss of sleep, nightmares, and flashbacks (Gates et al., 2011). The function of coping can be described as managing or modifying demands that occur in the present environment or within oneself. The purpose of coping is not to master a demand, but to tolerate, diminish, accept, or disregard a demand. Because of the function and purpose of coping the type of coping employed in each situation continually varies due to reassessment of the demand and environmental variations that arise (Hays et al., 2006).

The effectiveness of coping strategies among critical care nurses was explored by Schaefer et al. (1992) examining common stressors experienced by 209 critical care nurses. None of the identified stressors dealt with abuse of the nurse by patients and families but one important detail emerged. When coping with stress of any kind in the clinical setting it was recommended that aggressive coping behaviors, such as accusation and sarcasm, only results in a defensive position resulting in challenges of control, and a focus on the person rather than the problem. This aggressive coping behavior on the part

of the nurse will only escalate an otherwise already tense situation for the patient (Schaefer et al., 1992). The type of coping strategy used is an important aspect of nursing when dealing with abusive patients. The nursing literature has not explored how neurology nurses cope with abuse from patients and families but Gates et al. (2011) examined violence against emergency nurses and its impact on stress and productivity using the Impact of Events Scale – Revised (IES-R) by Carver (1989). The IES-R assesses existing distress on any number of specific life events and is an integral piece of the research described here. Gates et al. (2011) found that each participant experienced at least one stress symptom after a violent event. Of the three scales, the intrusion scale had the highest means with "any reminder brought back feelings about it" (82.5%). The avoidance scale had the second highest means after a violent event with "I avoided letting myself get upset when I thought about it or was reminded of it" (65%). The hyperarousal scale item with the highest number of participant symptoms was "I felt irritable and angry" (73%) (Gates et al., 2011). The results of this study showed that 17% of the participants had a high enough score to consider a diagnosis of PTSD and 15% had scores that indicated suppressed immune system functioning. The evidence presented in this one study substantiates the need to measure impact on nurses of abusive acts from patients and families.

During their research of abuse against nurses and its impact, Gates et al., (2011) determined that nurses are often not afforded the opportunity to examine the coping strategy they use in abusive situations with patients and families. They are expected to solve the problem and move on without creating a disturbance or making a big deal about the situation. ED nurses from Gates et al., (2011) study acknowledged that after a

physical assault by a patient or visitor, a return to work is expected unless they are physically injured. In these situations, nurses become jaded to the reality of their work environment and begin to use coping strategies that only temporarily solve tense situations that often result in verbal and physical abuse. Coping is an important factor used to reconcile one's own personal views with their actions, and therefore another aspect which should be examined in the current research. Because the neurology nurse is under represented in the nursing literature, how nurses cope with abuse from patients and families and how the abuse impacts the nurse will significantly improve our understanding of abuse in with this nursing population.

NEUROLOGY NURSE ABUSE

Neurology nursing is a very challenging nursing specialty dealing with assessment, nursing diagnosis, and management of many neurological disorders for which complicated patient care is provided. These disorders include trauma, brain injuries, stroke, seizure, tumors, aneurysms, dementia, as well as a host of other neurological complexities. Aggression is frequently a symptom of acquired brain injury (Alderman, 2007) and aggression by neuroscience patients is frequently a common reality for the nurse caring for this high risk patient population. These complex neurological conditions contribute in a large way to the verbal and physical abuse experienced by the neurology nursing population. The Bureau of Labor Statistics' Employment Projections for 2010-2020 released in February 2012, reveal that Registered Nursing has been identified as the number one profession in terms of job growth through 2020. Nursing is expected to grow by 712,000 (26%) from 2.74 million in 2010 to 3.45 million in 2020. The estimates also include the need for nearly 500,000 replacement nurses due to

retirement. This brings total job openings in the field of nursing to more than 1.1 million by the year 2020 (Bureau of Labor Statistics, 2012). Of this total nursing population, more than 1.5 million nurses are employed in general medical and surgical hospitals, where the majority of patient and family violence against nurses takes place. The neurology nurse is one of the specialties affected by this violence at a 3.9% workplace violence rate; the number of assaulted nurses is approximately 58,500 nurses per year (US Department of Justice, 2011).

Neurology nurses experiencing verbal and physical abuse by patients and families have rarely been addressed in great detail in the research literature. Neurology nurses managing the aggression of brain injured or demented neuroscience patients are often ill equipped to deescalate verbal or physical attacks by the patient, leading to feelings of inadequacy, resentment, and anger. In the qualitative meta-analysis on *Management of Aggression among Demented or Brain-injured Patients* Finfgeld-Connett (2009) recognized that patients with dementia or brain injury are difficult to manage due to their aggressive behaviors, which include difficulty expressing their needs and recalling and understanding basic information. While investigating perceptions of caring for neuroscience patients through qualitative interviews, Soreny (2009) found that physical aggression, actual or threatened, was reported by nurses as a common occurrence in neurology clinical settings. Also, patient violence was considered an inevitable occurrence and daily coping was difficult for the nursing staff. It was concluded that a combination of patients' physical and psychological needs set the context for the complexities the nurses face when delivering care to patients within this setting (Soreny, 2009). A study of aggressive behavior following traumatic brain injury by Baguley et al.

(2006) revealed 25% of patients were found to be aggressive at any given time over a 60 month period. These same patients were reported as aggressive by nurses caring for them in the early stages of recovery and remained aggressive in the long-term. This evidence shows a direct link between traumatic brain injury patients and aggression towards neurology nurses caring for them in the clinical setting. Because of these physical and psychological complexities, patient violence is an outcome frequently seen by nurses caring for neuroscience patients.

Neurology nursing is an underreported specialty. By establishing this nursing population as vulnerable to verbal and physical abuse by patients and families, nursing research not only broadens its scope on the subject of abuse, but solidifies and confirms the prevalence of nursing abuse in the existing literature. The new data gathered in the field of neurology nursing will also help confirm the urgent need for action in an area previously unreported.

ETHICAL NURSING CONSIDERATIONS OF ABUSIVE PATIENTS AND FAMILIES

Abuse of the nurse by patients and families can cause many ethical conflicts for the nurse. Ethics as defined by Ludwick et al. (2000) is, "a systematic way of examining the moral life to discern right and wrong; it also requires a decision or action based on moral reasoning" (p. 1). Ludwick et al. (2000) also believes that ethical conflicts transpire when an individual, group or society becomes unclear about what to do when faced with opposing moral choices and are often influenced by cultural values.

When patient violence occurs, one of those conflicts is whether or not to report the act of violence. As nurses we have a responsibility to protect our patient from harm, but when the abuse targets a nurse we must take into account the circumstances of each

situation. The nurse must determine if the act of violence was deliberate or accidental due to some medical condition. Neurology patients are especially likely to physically or verbally attack the nurse because of their altered neurologic related condition. In such a case, the patient is unaware of his or her actions. It must also be mentioned that reporting an act of abuse by the patient is not necessarily a report to the local police, but a report to the hospitals' in-house safety net reporting system. Most hospitals use their individual safety net systems for quality improvement purposes and not as a vindictive tool for punishing the nurse for reporting or the confused patient for their act of violence. However, if the act of abuse by the patient is deliberate and a pattern of deliberate abuse exists then the nurse must consider reporting the incident to the hospital's security, nurse manager, risk management department and the hospitals safety net reporting systems while also reporting the incident to local authorities. A report of physical nurse abuse from patients to the local authorities will assure that proper attention is given to the situation and continued deliberate physical abuse is halted. An immediate solution or prevention mechanism should then be put into place by the clinical staff and nursing management to prevent further harm to the nursing staff. Although this is undoubtedly the proper step to take, many nurses refuse to report acts of physical or verbal abuse because they simply feel that it's part of the job and in some cases they believe that nothing will be done about the incident. During their research of abuse against nurses and its impact Gates et al., (2011) confirmed that verbal and physical abuse incidences are not reported because of their belief that it would not make a difference. They felt that abuse is accepted and viewed as an expectation of the job by management who feel that reports of abusive incidence will negatively impact patient satisfaction (Gates et al., 2011). The

indifference exhibited by the ED nurse manager is often similar in inpatient units, like neurology.

Another ethical conflict is how to respond to family verbal and physical abuse against the nurse. The decision to report family verbal and physical abuse is typically an easier choice for the nurse. Family abuse against the nurse is almost always deliberate and purposeful. But an explanation for the family members' reason for verbal and physical abuse of a nurse is not as readily understood. However, adult family members of neurology patients should be held accountable for their actions. Sofield et al. (2003) believes that causes of verbal and physical abuse by family members toward nurses could be associated with the high stress conditions and the authority differences or imbalances that exist between the nurse and the family. For these reasons, nurses have the ethical responsibility to be as professional as possible and conduct themselves in a calm and reassuring nature when dealing with family members even if the resulting action is still abuse by the family. Celik et al. (2007) found that nurses from some cultures tend to blame themselves for the abuse and refuse to place blame on the abuser, which leads to underreporting of the abusive act. In the case of verbal abuse, the nurse should unequivocally contact nursing administration and hospital security if the verbal abuse seems to be escalating to threats and, in the case of physical assault, the local authorities should be contacted to press assault charges against the abusive family member. Still nurses continually underreport verbal and physical abuse from patients and families. Gacki-Smith et al. (2009) found that approximately 50% of nurses from one U.S. study indicated that verbal and physical abuse by patients and family members had never been reported due to the nursing belief that such incidents were considered to be part of the job

and reporting them would not be helpful to the nurse or nursing staff. Also they felt that a lack of evidence, e.g., no personal physical injury, was also a barrier for not reporting the violent incidents.

A third ethical conflict for nurses caring for verbally or physically abusive patients is the use of restraints and medications to prevent the abuse. Some critics of this method would assert that using restraints or medications to subdue an abusive patient only creates a more aggressive patient by taking away the patients' rights and, in some cases, this is true. Aggressive patients pose greater risks for engaging in verbal and physical abusive actions directed against the nurse, who is most likely the primary caregiver. Aggressive patients are not easily de-escalated even with the most experienced of nurses handling the episode. The use of restraints involves a period of risk before actions on the part of the patient clearly justify their employment. This period of risk may be accentuated by those who have already experienced abuse, whether from the same patient or others. But anyone who works as a nurse in an acute care hospital is quite familiar with regulations surrounding the use of physical or chemical restraints. Most often the use of restraints is temporary until the patient is able to better manage emotional issues that contributed to the abusive event. Duxbury et al. (2005) reports that use of 'de-escalation' techniques have most recently been encouraged but acknowledges that such techniques of 'de-escalation' are poorly defined in the literature. If de-escalation fails to subdue a physically abusive patient then the use of restraints, rapid sedation or isolation is the next option currently advocated in the nursing literature (Duxbury et al., 2005).

Within workplaces where nurses are subjected to verbally and physically abusive patients and families, it is important to explore the relationship between the differing

types of ethical conflicts and the nurses' knowledge and personal experiences related to patient and family abuse. The meaning that nurses ascribe to abusive events influences the nurses understanding of the abusive act, the perpetrator of the act and their response the abusive act. The meaning and understanding, which are often driven by the nurses' personal ethical and moral character, will ultimately influence the outcome for the nurse, patient and the family member. It is important to recognize that the implications of abuse towards the nurse are extraordinary with emotional, psychological, spiritual, intellectual and physical wellbeing at risk. Luck et al. (2007) states, "There is a current intellectual, tacitly held principle that actively discourages nurses 'judging' patients, their family and friends. Contradicting this is the active encouragement for nurses to use multiple sources of knowledge, within their appropriate governing body's ethical and legal boundaries, to make informed judgments" (p. 1077). It is within this legal and ethical boundary that nurses experiencing verbal and physical abuse from patients and families must cope with serious ethical conflicts while exercising their own personal judgment. Although ethical conflicts have always been a presence in the field of nursing, abuse against the nurse is contradictory to all we know in a profession meant to heal and protect the sick and comfort the dying.

SUMMARY OF BACKGROUND

In summary, with the current state of change in the healthcare industry in the United States where all Americans are now required to purchase medical insurance coverage, hospitals are now held responsible for inpatient infection rates, Medicare reimbursement to hospitals and physicians has dropped, and the baby boomer population is set to enter retirement age, the attention to nursing safety in the workplace may become a secondary focus. Therefore, it is imperative to remember that the nurse has been identified as the healthcare professional most at risk for verbal and physical abuse by patients and families within the healthcare industry and that 60 to 91% of the nurse population has experienced some form of violence in the workplace. Two frequent sources of this violence against nurses have been determined to be patients and families (Celik et al., 2007) predominantly because of the close contact with patients and families (Pich et al., 2010). Research has shown that violence towards nurses is rising and many specialty areas, with the exception of emergency and psychiatric nursing, are not represented in the current literature. Neurology nursing is one such under represented population experiencing violence from patients and families not found in the current literature. In addition, the incidence, intensity, impact and coping strategies of neurology nurses who experience verbal and physical abuse from patients and families is missing from the literature. This research will explore each of these gaps and explore the relationships between each and selected demographic characteristics.

Chapter 3: Methodology

INTRODUCTION

This chapter identifies the research design, describes the recruitment and sampling method, identifies the study setting and inclusion/exclusion criteria, discusses instrumentation, presents ethical considerations relevant to protection of human subjects and details of the data analysis are presented.

Methodology

RESEARCH DESIGN

A descriptive, exploratory research design was used for this study. An exploratory research design was used to investigate the relationship among two or more variables. This approach predicts the effect of one variable on another and tests the relationships between variables or population demographics (Portney et al., 2009). A descriptive research methodology was used to identify and describe the characteristics, behaviors, and conditions of neurology nurses coping with verbal and physical abuse from patients and families. This type of research design was indicated because the developmental phase of research often involves exploratory and descriptive research and allows for data collection without the introduction of a treatment or intervention (Polit et al., 2012).

SAMPLE, SETTING AND RECRUITMENT

The study sample consisted of 112 registered nurses living in the United States currently working as full or part-time nurses providing direct care for neurology patients. Participants had access to an email account, were able to retrieve the survey via a

recruitment email with a corresponding Survey Monkey© link and each was able to take the survey in any location of their choosing.

The sample were voluntary participants recruited from an anonymous contact population of 5312 neurology nurses using purposive sampling design techniques, which allowed for an intentional, specific sample of neurology nurses for inclusion in this study. Contact email addresses were purchased from Redi-data Health, an online database service specializing in healthcare marketing and research. In addition, invitations to participate were distributed to nursing directors and research directors at local and regional acute care hospitals in the southern U.S. who were invited to distribute the invitation according to their institutional policies.

INCLUSION CRITERIA

Inclusion criteria for participation included: neurology nurses currently working full or part-time in the U.S. caring for neurology patients, must read and understand English, must have had access to the internet, were employed for at least six months and were at least 21 years of age.

EXCLUSION CRITERIA

Exclusion criteria for participation included: nurses outside the United States, unemployed or retired nurses formerly caring for neurology patients or nurses currently caring for patients other than neurology patients, did not read and understand English, did not have access to the internet, employed less than six months or were younger than 21 years of age.

DATA COLLECTION

Data collection began on January 14, 2014 and ended on May 26, 2014. The data collection process consisted of one primary deployment of 5000 recruitment emails, containing a Survey Monkey© link to the questionnaire battery which included the Brief COPE Inventory, the Verbal and Physical Abuse Incidence and Intensity Scale (VPAIIS), the Impact of Events Scale-Revised (IES-R), and a bio-demographic data sheet created specifically for this study. The recruitment email provided a short explanation of the research emphasizing the anonymous nature of participation, it provided informed consent information, described time requirements of the survey, stated data security, invited each neurology nurse to participate in the study, and provided researcher contact information. Emails were distributed by Redi-Data Health, a healthcare data and marketing service. Additional surveys using the same recruitment email were dispersed to neurology nurses working in multiple local acute care hospitals in the southern U.S., by the administrative head of research for each hospital per their institutional policies, e.g., research credentialing and IRB approvals were met by three local acute care hospitals. Six other local and regional hospitals were contacted with two managers deciding to disperse directly to their staff per internal policy. The survey data was collected by Survey Monkey©, an online survey database company. To ensure maximum participation, a reminder email was sent to potential participants from the commercial database company at the one month and two month intervals with the survey link attached to facilitate the response rate. In addition, reminder emails were sent at the first two week interval for the acute care hospital surveys. The initial 5000 emails resulted in a response rate of .0004 with 2 responses. The first reminder email on February 11, 2014

resulted in no responses and the second reminder email on March 11, 2014 resulted in 6 additional responses. In all, a total response rate of .0064 with 8 responses was recorded from this approach. Recruitment emails to local and regional hospitals were dispersed at different intervals based on the approved times at each acute care hospital over a period of three weeks beginning March 25, 2014, with the final hospital's recruitment emails deployed on April 10, 2014. Data collection was extended to May 25, 2014 to permit ample time for participant response in an effort to maximize participation. The acute care hospital response rate was 33.3% with 104 responses recorded.

DATA MANAGEMENT

As data was collected, it was stored as part of Survey Monkey's © secure database then downloaded, cleaned and transferred to SPSS for Windows (v. 22) for analysis. Data was secured within a password secured laptop at the primary investigator's home office.

Instrumentation

This study utilized three established instruments (subscales or in whole) and a bio-demographic data sheet designed specifically for this study. The first instrument was the Brief COPE Inventory (Carver, 1997). The second was the Verbal and Physical Abuse Incidence and Intensity Scale (VPAIIS) (Celik et al., 2007; Lepiesova et al., 2013; Manderino et al., 1997, Trahan-Adapted, 2013). The third was the Impact of Events Scale-Revised (IES-R) (Weiss et al., 1997).

DEMOGRAPHIC SURVEY

Demographic data was obtained from neurology nurse participants through the use of a bio-demographic survey created specifically for this research study (Appendix A: Demographic Survey). The demographic survey collected the following information: age in years; gender; ethnicity (White/Caucasian, Hispanic/Non-White, Black/African American, Asian/Pacific Islander, American Indian/Alaskan Native); marital status (Single/Never Married, Married/Living with Partner, Separated/Divorced, Widowed); education - the highest nursing degree (Associates Degree, Diploma, Bachelor's Degree, Master's Degree, Doctoral Degree); years of neurology experience and asked participants if they were currently working as a full or part-time nurse caring for neurology patients. Age and work status, which required greater than one year of neurology nursing experience, were also used as screening variables to assure meeting inclusion/exclusion criteria.

VERBAL AND PHYSICAL ABUSE INCIDENCE AND INTENSITY SCALE (VPAIIS)

The Verbal and Physical Abuse Incidence and Intensity Scale (VPAIIS) was a composite instrument compiled from three established verbal and physical abuse incidence scales found in the nursing literature. 'Incidence' is a reflection of recalled frequency over a specified window of time and not purely new cases as used in epidemiological statistics, i.e., a respondent may be counting ongoing/continued instances from the same source during the period specified. The resulting instrument was a 48-item questionnaire that assesses eight factors: patient verbal abuse incidence and intensity, patient physical abuse incidence and intensity, family verbal abuse incidence and intensity, and family physical abuse incidence and intensity (Appendix B: VPAIIS).

Participants were asked to rate each item regarding incidence (frequency) on a 5-point Likert scale (0 = never, 1 = sometimes (25% of the time), 2 = frequently (50% of the time), 3 = often (75% of the time), and 4 = always) and intensity on a 5-point Likert scale (0 = never stressful, 1 = sometimes stressful, 2 = frequently stressful, 3 = often stressful, and 4 = always stressful). Stems for the verbal abuse incidence section of the VPAIIS (yelled or shouted at you, cursed or swore at you, belittled or humiliated you, spoke inappropriately, nasty, or rudely to you, wrongfully accused or lied against you, and were threatened in a hostile way) were adapted from the Verbally Abusive Behaviours Scale developed by Celik et al., (2007) from their study on verbal and physical abuse against nurses working in hospitals in Turkey. The stems from the physical abuse incidence section of the VPAIIS (pushed or shoved you, threw objects at you, slapped or punched you, kicked you, bit you, and stabbed you with sharp item or assaulted with weapon) were adapted from the Violence and Aggression Scale of Patients (VAPS) developed by Lepiesova et al., (2013) from their study on the incidence of patient aggression against nurses. The incidence 5-point Likert scale was adapted from the 6-point Likert scale used on the Violence and Aggression Scale of Patients (VAPS) developed by Lepiesova et al., (2013). The intensity 5- point Likert scale was adapted from the 7-point Likert scale used on the Verbal Abuse Scale (VAS) developed by Manderino et al. (1997). Scoring the VPAIIS consists of generating mean scores for each of the six items on each of the eight factors.

Reliability and Validity

Reliability and validity are based in part on information provided for each of the scales used to construct the VPAIIS. The stem items for verbal abuse used from Celik et

al. (2007) were developed by the researchers with information acquired from a literature review and the American Medical Association. Reliability testing of the stem items developed by Lepiesova et al. (2013) yielded Cronbach's alpha scores ranging from .82 to .86. The three scales tested (S – verbal aggression, T1 - physical aggression with no use of offensive weapon, T2 – physical aggression with the use of offensive weapon and contact forms of sexual aggression) were inclusive of the six stems used for this study. Content validity was assessed using a team of four experts from the disciplines of nursing, psychology, and philosophy.

Psychometric testing of the VPAIIS as currently constructed consisted of a content validity assessment, performed by the Primary Investigator, using a panel of 22 critical care nurses from five ICUs all familiar with coping in high stress situations and all familiar with the concept of verbal and physical abuse. The panel of critical care nurses were given the final version of the VPAIIS and asked to answer each question while critiquing the appropriateness of the content for each question. They were asked to comment on understandability, clarity and structure of each question. All comments and suggestions were verified with each participant. Only one minor grammatical change was made.

IMPACT OF EVENTS SCALE REVISED (IES-R)

Daniel S. Weiss and Charles R. Marmar developed The Impact of Events Scale – Revised in 1997 from an earlier version in an effort to measure the DSM-IV criteria for PTSD. The objective was to also assess hyperarousal cluster of symptoms, exposure to a traumatic event, duration of symptoms and impairment due to symptoms. The IES-R is a self-reported 22-item measure intended to subjectively assess existing distress on any

number of specific life events (Appendix C: IES-R). The IES-R has randomly added seven new items to the original 15-item IES. Six of the seven new items assess hyperarousal symptoms such as, anger and irritability, heightened startle response, difficulty concentrating, and hypervigilance. One new item has been added to the intrusion subscale and assesses the dissociative-like re-experiencing when experiencing true flash-backs. Of the 22 items on the IES-R, eight items measure the avoidance subscale, eight items measure the intrusion subscale, and six items measure the hyperarousal subscale. IES-R survey participants are asked to rate each item using a 5-point Likert scale of 0 (not at all) to 4 (extremely) according to the past seven days in response to a specified condition (e.g., hurricane, situation, event(s)). For the purposes of this study, survey participants were asked to rate IES-R items based on their overall experience of abuse from patients and families over the past six months. Mean scores were generated for each of three subscales as follows: Avoidance subscale = mean of items 5, 7, 8, 11, 12, 13, 17 and 22; Intrusion subscale = mean of items 1, 2, 3, 6, 9, 14, 16 and 20; and Hyperarousal subscale = mean of items 4, 10, 15, 18, 19 and 21. A Total IES-R score was computed by summing across all items resulting in a possible range of 0-88. A total IES-R score of 33 or over out of a maximum of 88 signifies the likely presence of PTSD, i.e., a high degree of PTSD symptomology; lower scores are better (Weiss et al., 1997). For the purposes of this study, in addition to the total and subscale scores, a dichotomous PTSD impact variable was created for subsequent outcomes analysis using the clinical criteria of 33 or over as the split point. In addition, high and low frequency and intensity verbal and physical (patient and family) groups were created using mean and median splits on those variables.

Reliability and Validity

With a total of 1003 participants from four different population samples (Oakland police, San Jose police, New York police, and a comparative sample), Weiss et al. (1997) reported that the internal consistency of the three subscales was found to be very high, with Intrusion alphas ranging from .87 to .92, Avoidance alphas ranging from .84 to .86, and Hyperarousal alphas ranging from .79 to .90 (Briere, 1997). In addition test-retest data for two of the samples in the Weiss et al. (1997) study were available. Sample 1 (n = 429) yielded correlation co-efficients for the intrusion, avoidance, and hyperarousal subscale of .57, .51, and .59 respectively. Sample 2 (n = 197) yielded correlation co-efficients considerably higher at .94, .89, and .92 for intrusion, avoidance, and hyperarousal subscales. With regard to trauma, the hyperarousal subscale has proven to have good predictive validity (Briere, 1997). The two original IES subscales, Intrusion and Avoidance, have proven to identify changes in the clinical status of respondents' over time and determine any relevant variances in reaction responses of varying severity to distressing events (Weiss et al., 1997). Content validity was available and had endorsement as high as 85% for the intrusion and avoidance subscales, but was not available for hyperarousal (Horowitz et al., 1979).

A reliability analyses was performed on the IES-R items for this study. The internal consistency was found to be very high with 22 items tested. The Cronbach' Alpha for the IES-R was .955 (Table 3.1). In addition, item groupings representing each of the three subscales (Avoidance, Intrusion and Hyperarousal) were performed. The internal consistency was found to be high for Avoidance with eight items tested, Intrusion with eight items tested and for Hyperarousal with six items tested. The Cronbach' Alpha

for the Avoidance subscale was .866, for Intrusion was .916 and for Hyperarousal was .891. Such high alphas strongly suggest a degree of redundancy in the item pool.

BRIEF COPE INVENTORY

The COPE Inventory was developed partially from literature found on coping, from the model of coping developed by Lazarus et al. (1984), and from the model of behavioral self-regulation developed by Carver et al. (1981, 1990). The COPE has been used in health related studies and extensive convergent and divergent validities related to the COPE Inventory have been reported. Antoni et al. (1991) studied distress as an end point in HIV-positive men and discovered that denial and behavioral disengagement are potential predictors of distress. A second study of women diagnosed with breast cancer by Carver et al. (1993) also determined that denial and behavioral disengagement are potential predictors of distress. Lutgendorf et al. (1998) concurred with Carver et al. (1993) and with Antoni et al. (1991) that acceptance as a coping response was a potential predictor of lower distress.

Table 3.1: Cronbach's Alpha Internal Consistency and Reliability Coefficients of Impact of Events Scale (N= 22) and the Brief COPE Inventory (N = 28) and subscales

Instrument	*Number of Items*	*Cronbach's Alpha*
Impact of Events Scale – Revised (IES-R)	22	.955
Avoidance Subscale	8	.866
Intrusion Subscale	8	.916
Hyperarousal Subscale	6	.891
Brief COPE Inventory	28	.960
Avoidance coping scale	12	.882
Task coping scale	8	.905
Social Emotional coping scale	8	.929

The Brief COPE Inventory (Appendix D: Brief COPE Inventory) is a condensed version of the COPE Inventory developed by Carver (1989) and can be used when time restrictions or high response burden is a consideration. The Brief COPE has been utilized in more than 200 empirical healthcare-related research studies. These study populations included: nurses, emergency workers, physicians, pharmacy students, heart failure patients, and HIV and AIDS patient populations (Krageloh, 2011). The Brief COPE is comprised of 14 scales, with two items each. The 28 items and their scales are: self-distraction, active coping, denial, use of emotional support, use of instrumental support, behavioral disengagement, venting, positive reframing, planning, humor, acceptance, religion, self-blame and substance use. A 4-point Likert scale from 1 (I usually don't do this at all) to 4 (I usually do this a lot) is used with each item. Each item is summed for each subscale. Subscales with the highest scores point toward more frequent use of that coping approach.

The Brief COPE Inventory can be used as an assessment tool for an extensive range of coping strategies and reactions to stress in both adolescents and adults ages 14 and up (Carver, 1997). Current evidence indicates that numerous coping responses assessed by the COPE and Brief COPE are key to the coping process and certain responses are a predictor of potential physiological side-effects. For the purposes of this research study three global coping scales referred to as Avoidance, Task, and Social/Emotional coping were used. The three global scales as suggested by Carver (1997) were configured using the following: Avoidance coping = self-distraction + denial + substance use + behavioral disengagement + acceptance + self-blame; Task coping =

active coping + planning + humor + positive reframing; Social/Emotional coping = use of emotional support + use of instrumental support + venting + religion.

Reliability and Validity

Internal consistency reliabilities for the Brief COPE Inventory are based on three convenience samples of 168, 124 and 126 participants from Florida communities. Carver (1997) reported alphas of 0.50 – 0.87 during the one year recovery period after Hurricane Andrew. An exploratory factor analysis on the 28 item set revealed eigenvalues greater than 1.0 on nine factors. This explained 72.4% of the variance in participant response. All primary loadings exceeded .4 with 22 out of 28 greater than .6, six secondary loadings greater than .3, and one greater than .4. According to Carver (1997) factor formation of the Brief COPE evolved slightly, but was remarkably similar to the factor loadings of the original COPE Inventory.

Reliability analyses were performed on the Brief COPE Inventory and the three global subscales for this study. The internal consistency was found to be very high for the total scale and for the three global subscales (Table 3.1).

PROTECTION OF HUMAN SUBJECTS

Permission to conduct this study was obtained from the University of Texas Medical Branch Institutional Review Board (IRB) (Appendix E). It was determined that potential risks associated with participation in this study were unlikely and the risk of physical or mental harm was considered to be minimal. One potential risk of participation could be the evocation of previously unrecognized feelings about a topic covered on one of the surveys. The feelings encountered may pertain to minor stressors related to completing questionnaires on verbal and physical abuse coping, verbal and physical

abuse incidence, intensity, impact and bio-demographic information. Therefore, participants were advised to seek counseling or withdraw from the study if distressing feelings arose. All data collected remain anonymous and was stored in a password protected database accessible on a password secured laptop. Participants were allowed to answer survey questions using a computer of their choice. Participants were informed of the voluntary nature of the study and that they could withdraw at any time by simply quitting out of the electronic survey. Involvement did not place participants at risk of civil or criminal liability or negatively affect the participants' financial status, employability, personal confidentiality or personal reputation due to the completely anonymous nature of participation. Prior to accessing and completing the survey, participants were informed that opening and completing the survey indicated their consent to participate. Individual responses to the survey were not linked to any identifying information and they were provided with contact information for the researcher. No participant was denied involvement in this study based on gender, age, ethnicity, or sexual orientation.

DATA ANALYSIS

In this descriptive, exploratory research design, neurology nurses from across the U.S. and local acute care hospital completed the online study survey, which included the Verbal and Physical Abuse Incidence and Intensity Scale (VPAIIS), Impact of Events Scale – Revised (IES-R), Brief COPE Inventory and the Bio-Demographic data sheet. The principal investigator utilized the Statistical Package for Social Sciences (SPSS) version 22.0 for the purposes of scoring, statistical analysis and comparison of results. The data was examined for systematic missing data, marked skewness and outliers. All

data was examined for normality and homogeneity. Internal consistencies and reliabilities of the Impact of Events Scale – Revised and the Brief COPE Inventory were computed using Cronbach's Alpha.

Aim 1 Research Questions 1.1, 1.2, and 1.3 were answered using descriptive statistics (means, interquartile ranges, medians, frequency distributions and skewness) to compute for incidence and intensity of verbal and physical abuse of patients and families and IES-Avoidance, Intrusion, Hyperarousal subscales and IES-R Total Score. Descriptive statistics are used to characterize the shape, central tendency and variability within a set of data, often with the intent to describe a population (Portney et al., 2009).

Aim 2 Research Question 2.1 was answered using Pearson's correlation coefficient to explore the relationships between years of neurology experience and age with the Avoidance, Task, and Social/Emotional coping scales, the incidence and intensity of experienced physical and verbal abuse and measures the IES-Avoidance, Intrusion, Hyperarousal subscales and Total Score. Research Question 2.2 was answered using partial correlational analyses to explore the relationships between the three coping scales and physical and verbal abuse incidence and intensity and measures of impact while controlling for age and years of experience. Research Question 2.3 was answered using forward and backward stepwise multiple regression analyses to assess the unique and total contribution of coping strategies (Avoidance, Task, and Social/Emotional coping), the incidence and intensity of experienced physical and verbal abuse and demographic variables (gender, years of neurology experience and age) on measures of impact and IES-R Total Score. Research Question 2.4 was answered using forward and backward stepwise logistic regression to assess the unique and total risk contribution of

coping strategies (Avoidance, Task, and Social/Emotional coping), the incidence and intensity of experienced physical and verbal abuse and demographic variables (gender, years of neurology experience and age) on the high/low dichotomized Total IES Impact scores.

Aim 3 Research Question 3.1 was answered using one-way analyses of covariance (ANCOVA) to test differences between genders controlling for age and years of neurology experience on Avoidance, Task and Social/Emotional coping. Research Question 3.2 was answered using two-way analyses of covariance (ANCOVA) to compare the identified coping strategies utilized by neurology nurses experiencing high/low verbal and physical abuse and high/low impact across gender controlling for age and years of neurology experience. Mean/median splits on incidence and intensity provided the criteria for dichotomizing those variables into high and low subgroupings for comparative analyses. The clinical criterion of a score of 33 or higher for Total IES Score was used to signify high versus low PTSD risk.

Chapter 4: Results

Introduction

Chapter four will present the results of the study including sample characteristics, descriptive psychometric results for study instruments, analysis and results for each research question.

This study had one purpose and three aims. The purpose of the study was to assess the incidence, intensity and impact of verbal and physical abuse experienced by neurology nurses from patients and families, identify current coping strategies of neurology nurses, and explore the relationships between selected demographic characteristics and present-day coping strategies. The aims of the study were to a) assess the incidence, intensity and impact of verbal and physical abuse experienced by neurology nurses from patients and families; b) explore the relationships between the three global coping scales, Avoidance, Task, and Social/Emotional coping, the incidence and intensity of experienced physical and verbal abuse, measures of impact (IES-Avoidance, Intrusion, Hyperarousal subscales, and IES Total Score) and selected demographic characteristics; c) evaluate coping strategies utilized by neurology nurses experiencing high versus low verbal and physical abuse from patients and families across selected demographic characteristics.

Neurology Nurse Demographic Characteristics

Table 4.1 displays the breakdown across a sample of 112 neurology nurses recruited via email who completed the survey. The sample was largely white (39.3%) and Asian (34.8%), female (84.8%), and married/living with partner (65.2%). The age of

participants ranged from 22 to 67 years, with a mean age of 39.96 years (sd=10.48). The majority of nurses (82.1%) had bachelors degrees. Years of neurology experience ranged from 1 to 34 years, with a mean of 8.28 years (sd=6.82).

Table 4.1: Demographic Characteristics of Neurology Nurse Sample (N = 112)

Variable	Value	Frequency	Percent
Age	Under 26	13	11.6
	26-35	24	21.4
	36-45	42	37.5
	46-55	23	20.5
	56+	10	8.9
Neurology Nurse Years	< 6 years	46	41.1
	6-10 years	34	30.4
	11-15 years	17	15.2
	16-20 years	8	7.1
	20 + years	7	6.3
Gender	1 = Male	17	15.2
	2 = Female	95	84.8
Ethnicity	1 = Am. Indian/Alaskan Native	1	0.9
	2 = Asian/Pacific Islander	39	34.8
	3 = Black/African American	15	13.4
	4 = Hispanic/Non-White	13	11.6
	5 = White/Caucasian	44	39.3
Marital Status	1 = Single/Never Married	28	25.0
	2 = Married/Living with Partner	73	65.2
	3 = Separated/Divorced	9	8.0
	4 = Widowed	2	1.8
Highest Nursing Degree	1 = Associates Degree	12	10.7
	2 = Diploma	1	0.9
	3 = Bachelors Degree	92	82.1
	4 = Masters Degree	7	6.3
	5 = Doctoral Degree	0	0

The Brief COPE Inventory is a measure of coping stratigies used when stressful or abusive events occur. The three scales, Avoidance, Task and Social Emotional coping are scored using a Likert scale 1 = I haven't been doing this at all to 4 = I've been doing this a lot. Only skewness was noted for Avoidance coping scale due to the low average scores on the scale (Table 4.2). Item means ranged from 1 to 3.88 indicating a

distribution of answers from low to high on the Likert scale and frequent use of some aspects of certain coping strategies. However, overall means for each subscale reflected a low usage, i.e., less than 2.0, for all the subscales.

Table 4.2: Descriptive Statistics Brief COPE (N=112)

Instrument	Scale	Mean	SD
Brief COPE Inventory	Avoidance Coping	1.46	.484
	Task Coping	1.89	.765
	Social/Emotional Coping	1.90	.807

PRELIMINARY ANALYSIS

Preliminary analyses of the data consisted of evaluation of the descriptive statistics for systematic missing data, marked skewness, the presence of outliers and heterogeneity in addition to assessing extraneous variables for inclusion in study analyses as covariates. Chi-square analyses were run to assess significant relationships between nominal variables, Pearson's r correlation assessed extraneous relationships between interval level variables, and independent t-test and ANOVA examined differences between interval and ordinal level variables between groups. There was no missing data, presence of outliers or heterogeneity detected. Some skewness was detected but determined to be inconsequential to the overall analyses.

RECODED DEMOGRAPHIC VARIABLES

To ensure an adequate number of cases in each variable category, a chi-square was performed on the demographic variables. Due to small representation in some categories, the following variables were collapsed into fewer categories (Table 4.3): marital status, ethnicity and highest degree.

Table 4.3: Recoded Demographic Variables

Category	Variable	Frequency	Percent
Ethnicity	1 = White/Caucasian	44	39.3
	2= All other Ethnicities	68	60.7
Marital Status	1 = Married/Living with Partner	73	65.2
	2 = Not Married	39	34.8
Highest Nursing Degree	1 = Bachelors Degree	92	82.1
	2 = All other Degrees	20	17.9

Ethnicity was recoded to reflect two categories reflecting a comparison with the traditional majority reference group "White/Caucasian" and "all other ethnicities" which included American Indian/Alaskan native, Asian/Pacific islander, Black/African American and Hispanic/Latino. Marital status was regrouped to reflect "Married/Living with partner" and "Not Married" which included single/never married, separated/divorced and widowed. Highest nursing degree was regrouped into "Bachelors degree" and "all other degrees" which included Associates degrees, Diplomas, and Masters degrees. There were no respondents with doctoral degrees.

Chi square analyses with the combined variables were not significant, which indicates no association between study variables (Table 4.4). The independence between demographic variables means they are not required to be used as covariates.

Table 4.4: Chi-square results for recoded variables (N = 112)

	χ^2	df	Asymp. Sig. (2-sided)
Gender-Recoded Ethnicity	.134	1	.714
Gender-Recoded Marital	.002	1	.965
Gender-Recoded Education	1.959	1	.162
Recoded Ethnicity-Recoded Marital	.465	1	.495
Recoded Ethnicity-Recoded Education	.333	1	.564
Recoded Marital-Recoded Education	1.035	1	.309

STUDY QUESTIONS

AIM 1: To assess the incidence, intensity and impact of verbal and physical abuse experienced by neurology nurses from patients and families.

RQ 1.1 What is the *incidence* of verbal and physical abuse experience by neurology nurses from patients and families?

Table 4.5 displays the descriptive analyses for the different incidence scales associated with the Verbal and Physical Abuse Incidence and Intensity scale (VPAIIS). The results reveal that verbal and physical abuse incidence mean scores for patients were reported as higher than those for families. This indicates that verbal and physical abuse occurs most often from patients. In addition, both patient and family verbal abuse were higher than physical abuse for either group indicating that the majority of the abuse from both patients and families directed at the neurology nurse is verbal abuse.

Table 4.5: VPAIIS statistics for Incidence of Verbal and Physical Abuse (N=112)

Instrument	Variable	Mean	SD
Verbal and Physical Abuse Incidence	Patient Verbal Incidence	1.97	0.48
	Family Verbal Incidence	1.83	0.61
	Patient Physical Incidence	1.45	0.32
	Family Physical Incidence	1.04	0.13
	Total Mean Verbal Incidence	1.90	0.50
	Total Mean Physical Incidence	1.24	0.19

As Table 4.6 displayes the descriptive analyses for the most frequent specific kinds of verbal and physical abuse encoutered from patients and families. The range of incidents reported for patient verbal and physical abuse was from 1 = never to 4 = always. For both patients and families the majority of nurses who experienced verbal abuse from patients experienced being ‘yelled or shouted at’ and ‘spoken inappropriately,

nasty or rudely to'. More patients 'yelled or shouted' at nurses while more families 'spoke inappropriately, nasty or rudely' to the neurology nurses.

For physical abuse, neurology nurses experienced the majority of physical abuse from patients as objects being thrown or being spit at and being kicked while the majority of physcial abuse from the families came in the form of thrown objects or spitting and being pushed and shoved. When comparing the types of physical abuse from patients and families we can see that both groups behaved the same by most often thowing objects or spitting at the neurology nurse. When calculating the mean change, there is a 51.9% greater chance of having an object thrown or being spit at by patients than by families. Patients' second most frequent physical abuse act was 'kicking' the nurse while families chose to 'push or shove' the nurse.

Table 4.6: Most Frequent Specific Kinds of Verbal and Physical Abuse Incidence from Patients and Families (N = 112)

	Patients					Families				
Incidence	**N**	**%**	**Range**	**Mean**	**SD**	**N**	**%**	**Range**	**Mean**	**SD**
Verbal Abuse										
Yelled or Shouted at	108	96.4	1-4	2.22	.57	73	75.9	1-4	2.06	.841
Spoke Inappropriately Nasty Or Rudely	106	94.6	1-4	2.28	.67	96	85.7	1-4	2.22	.835
Mean Verbal Incidence			1-4	1.97	.48			1.00-3.83	1.83	0.61
Physical Abuse										
Threw objects/Spit	69	61.6	1-3	1.64	.535	8	7.1	1-3	1.08	.304
Kicked	60	53.6	1-4	1.58	.595	2	1.8	1-2	1.02	.133
Push/Shoved	47	42.0	1-3	1.45	.551	7	6.2	1-2	1.06	.243
Mean Physical Incidence			1.00-2.17	1.45	0.32			1.00-1.83	1.04	0.13

RQ 1.2: What is the *intensity* of verbal and physical abuse experienced by neurology nurses from patients and families?

Table 4.7 displays the descriptive analyses for the different intensity scales associated with the Verbal and Physical Abuse Incidence and Intensity scale (VPAIIS). When examining mean scores for the intensity or stressfulness of the incidence the patients' physical intensity mean was higher than families, and the verbal abuse intensity mean for families was higher than patients. This indicates that when patients become physically abusive compared to the families, neurology nurses considered the patients abuse to be more intense while the verbal intensity from verbally abusive families was conveyed as more intense than patients.

Table 4.7: VPAIIS statistics for Intensity of Verbal and Physical Abuse (N=112)

Instrument	Variable	Mean	SD
Verbal and Physical Abuse Intensity	Patient Verbal Intensity	3.07	1.12
	Family Verbal Intensity	3.35	1.20
	Patient Physical Instensity	3.29	1.25
	Family Physical Instensity	2.66	1.39
	Total Mean Verbal Intensity	3.18	1.09
	Total Mean Physical Intensity*	3.22	1.27

*N = 96 for Mean Physical Intensity

Table 4.8 displays the descriptive analyses for most frequent specific kinds of verbal and physical abuse from patients and families. The range of intensity reported for patient verbal abuse and patient physical abuse was from 1 = never stressful to 5 = always stressful. The family verbal abuse intensity had the the highest mean followed by the patient physical abuse intensity, and patient verbal abuse. Family physical abuse was the least intense of the four sources. The majority of nurses reported that the verbal abuse events from patients with the highest intensity were 'being yelled or shouted at' and 'being wrongly accused or lied against' compared to the highest from families which included 'being threatened in a hostile way' and also being yelled or shouted at'. Because the means from the verbal intensity are higher for families than patients in three cases and

equal in one, this indicates that neurology nurses felt that verbal abuse from families was more intense than the verbal abuse from the patients. The highest intensity physical abuse events reported by neurology nurses from patients were 'being kicked' and 'having objects thrown at or being spit on' compared to families which included 'being pushed or shoved' and 'having objects thrown or being spit at'. The intensity means for 'having objects thrown or being spit at' and being 'pushed and shoved' are higher for patients than families. This indicates that neurology nurses felt that the physical abuse from patients was more intense than the physical abuse from the families. It should also be noted that the actual number of incidents reported from families was dramatically fewer than those reported from patients.

Table 4.8: Most Frequent Specific Kinds of Verbal and Physical Abuse Intensity from Patients and Families (N = 112)

	Patients					Families				
Intensity	**N**	**%**	**Range**	**Mean**	**SD**	**N**	**%**	**Range**	**Mean**	**SD**
Verbal Abuse										
Wrongly Accused /Lied against	79	70.5	2-5	3.35	1.24	72	64.2	1-5	3.44	1.26
Threatened in Hostile way	68	60.7	2-5	3.29	1.32	40	35.9	2-5	3.73	1.28
Yelled or Shouted at	106	94.6	1-5	3.48	1.22	84	75.0	1-5	3.48	1.22
Belittled/Humiliated	72	64.3	1-5	3.16	1.26	66	58.9	1-5	3.40	1.18
Mean Verbal Intensity			1-5	3.07	1.12			1-5	3.35	1.20
Physical Abuse										
Threw objects/Spit at	67	59.8	1-5	3.38	1.29	7	6.2	1-5	2.25	1.16
Kicked	60	53.6	2-5	3.42	1.23	2	1.8	2	2.00	0.00
Pushed/Shoved	46	41.1	1-5	3.36	1.29	5	4.5	1-5	2.29	1.38
Mean Physical Intensity			1-5	3.29	1.25			1-5	2.66	1.39

RQ 1.3: What is the *impact* of verbal and physical abuse experience by neurology nurses from patients and families?

Table 4.9: Characteristics of Neurology Nurses Impact of Verbal and Physical Abuse from the Impact of Events Scale – Revised (IES-R) (N = 112)

IES-R Scales	**N with score ≥ 1**	**% with score ≥ 1**	**Score Range**	**# of Items**	**Mean**	**SD**	**Min**	**Max**
Avoidance	72	64.3	1 - 3	8	0.84	.753	0	4
Intrusion	64	57.1	1 – 3	8	0.72	.703	0	4
Hyperarousal	47	42.0	1 - 4	6	0.63	.738	0	4
IES-R Total Score	97	86.6	1 - 66	22	16.25	15.09	0	88

Table 4.9 shows that of the 112 participants, 86.6% had Total IES-R scores ranging from 1 – 66 which indicates the presence of at least one stress symptom after a violent event. The Avoidance Scale has the highest mean at 0.84 and the highest percentage of neurology nurse participants having a score ≥ 1 followed by the Intrusion Scale and the Hyperarousal Scale which had 57.1% and 42% (respectively) of participants having a score of ≥ 1. The data shows that the neurology nurse participants were more likely to use the items associated with the Avoidance Subscale more often when dealing with the verbal and physical abuse from patients and families.

AIM 2: To explore the relationships between the three global coping scales, Avoidance, Task, and Social/Emotional coping, the incidence and intensity of experienced physical and verbal abuse, measures of impact (IES-Avoidance, Intrusion, Hyperarousal subscales and IES Total Score) and selected demographic characteristics.

RQ 2.1: What is the relationship between years of neurology experience and age with the Avoidance, Task, and Social/Emotional coping scales from the Brief COPE, the incidence and intensity of experienced physical and verbal abuse as measured by the Verbal and Physical Abuse Incidence and Intensity Scale (VPAIIS), and measures of impact from the Impact of Events Scale – Revised (IES-R) (IES-Avoidance, Intrusion, Hyperarousal subscales and Total Score)?

A small significant correlation between years of neurology nurse experience and the Mean Patient Physical Incidence ($r= 0.208$, $p<.028$) was found indicating a higher incidence of patient physical abuse as reported by older nurses. This could be due to the greater length of time in practice as a nurse or sensitization to actions that are perceived as abusive. No other statistically significantly relationships with age or years of neurology experience with any of the study variables were identified.

RQ 2.2: What is the relationship between the coping strategies (Avoidance, Task, and Social/Emotional coping), the incidence and intensity of experienced physical and verbal abuse and measures of impact (IES-Avoidance, Intrusion, Hyperarousal and Total IES-R Score) controlled for years of neurology experience and age?

Pearson correlation coefficients were computed between the subscales of all three instruments (Brief Cope Avoid, Task and Social Emote scales; Impact of Events – R, Avoidance, Intrusion, Hyperarousal and Total IESR Score; VPAIIS Mean Patient Verbal and Physical Incidence, Mean Family Verbal and Physical Incidence, Mean Patient Verbal and Physical Intensity and Mean Family Verbal and Physical Intensity). Results indicated a pattern of small significant positive relationships (higher values on one were associated with higher values on the other) between the IES subscales and patient verbal and physical incidence and intensity (Table 4.10). A similar pattern also was evident between the IES subscales and family verbal incidence and intensity but largely lacking for family physical incidence or intensity.

For the coping subscales, only family verbal incident showed significant but small correlations with all three. The most robust pattern of relationships were between significant positive correlations between coping and the impact subscales which were of

moderate to large magnitude indicating that higher use of all three coping strategies is related to higher scores on all three of these impact scales. Of the three, Avoidance coping shows the strongest correlations with the three impact dimensions.

The evidence for correlations of small magnitude between variables met the assumption for regression analyses in the next research question. For those with larger relationships (i.e., >.60), high correlations among key variables dictated the need to review tolerance statistics to rule out multicollenearity.

A partial correlation was then computed between subscales controlling for Age and NeuroYears. Four variable pairing were identified as having a change in statistical significance (Table 4.11).

The bi-variate partial correlation between Mean Patient Physical Incidence and Brief COPE Task scale changed from a marginal positive correlation of .183 to a slightly larger and small significant correlation when controlling for age and years as a neuro nurse. Mean Patient Physical Incidence and Brief COPE Social Emotional scale changed from a marginally significant positive correlation to a slightly larger but still marginally significant correlation of .051. Mean Family Verbal Incidence changed from a marginally significant positive correlation to slightly larger significant correlation and Mean Patient Verbal Intensity changed from a significantly positive correlation to a slightly lower marginally significant correlation of .052. The increases in strength when controlling for age and years as a neuro nurse reflect slight masking effects of age and experience whereas the decrease in strength seen with Mean Patient Verbal Intensity and Avoidance impact suggests that some of the effect was due to age and experience rather than the relationship between patient verbal abuse and avoidance impact.

Table 4.10 Significant Correlations Between Cope X VPAIIS X IES-R Scales

r= p< n=	BRIEF COPE SCALES			IMPACT OF EVENTS SCALES (IES)		
	Avoidance	Task	Social Emote.	Avoidance	Intrusion	Hyperarousal
Verbal Incidence						
Patient	-	-	-	.244 .01 112	.272 .004 112	.300 .001 112
Family	.188 .047 112	.222 .025 112	.219 .02 112	.337 .001 112	.344 .001 112	.293 .002 112
Physical Incidence						
Patient	-	-	-	.270 .004 112	.285 .002 112	.287 .002 112
Family	-	-	-	-	-	-
Verbal Intensity						
Patient	-	-	-	.187 .049 111	.319 .001 111	.242 .01 111
Family	-	-	-	.278 .005 102	.387 .001 102	.325 .001 102
Physical Intensity						
Patient	-	.225 .031 92	-	.326 .002 92	.379 .001 92	.351 .001 92
Family	-	-	-	-	.567 .028 15	-
IES						
Avoidance	.682 .001 112	.629 .001 112	.552 .001 112			
Intrusion	.696 .001 112	.594 .001 112	.500 .001 112			
Hyperarousal	.657 .001 112	.572 .001 112	.465 .001 112			
Total IES-R	.725 .001 112	.640 .001 112	.543 .000 112			

Table 4.11: Changes in Pearson's *r* Correlation when controlling for age and years as a neurological nurse (N = 112)

			Partial Correlation			Pearson's r			
Control Variables			**BCope Task**	**Avoid IESR**	**BCope Social Emote**		**BCope Task**	**Avoid IESR**	**BCope Social Emote**
Age & Neuro Years	**MPatient Physical Incidence**	r	.225		.187	r	.183		.162
		p	.018		.051	p	.053		.089
		N	108		108	N	112		112
	MFamily Verbal Incidence	r	.208			r	.176		
		p	.029			p	.064		
		N	108			N	112		
	MPatient Verbal Intensity	r		.186		r		.187	
		p		.052		p		.049	
		N		107		N		111	

RQ 2.3: What is the best set of predictors of impact Total IES-R Score among coping strategies (Avoidance, Task, and Social/Emotional coping), the incidence and intensity of experienced physical and verbal abuse and demographic variables (gender, years of neurology experience and age)?

Due to the pattern of moderate to high correlations between some predictor variables revealed in the prior research question, collinearity statistics were run on all potential predictors then reviewed. Tolerance values exceeded .1 indicating that the assumption of non-multicollenearity was satisfied. The higher the tolerance, the more new information a variable will contribute (Portney et al., 2009).

Forward stepwise regression on Total impact scores resulted in a significant model retaining three variables as significant predictors - BCope Avoidance, Family Verbal Incidence and Patient Verbal Intensity - accounting for 59% of variance in Total impact. Of the variance accounted for, Brief Cope Avoidance accounted for 67%. The positive relationships indicate a proportional increase in Total impact for every 1 point increase in the predictor.

Table 4.12: Stepwise Regression Analyses for Total IESR

Variable(s) Included	R^2	Standardized β	p<
FORWARD			
Model: F(3,111) = 51.982, p < .001	.591		
BCope Avoidance		.670	.000
Family Verbal Incidence		.224	.001
Patient Verbal Intensity		.138	.027
BACKWARD			
Model: F(5,111) = 34.751, p < .001	.621		
BCope Avoidance		.569	.000
BCope Task		.403	.005
BCope Social Emote		-.300	.021
Patient Verbal Intensity		.158	.011
Family Verbal Incidence		.238	.000

Backward stepwise regression which is more inclusive and allows for the capture of synergistic effects between variables resulted in a model with five significant predictors - BCope Avoidance, BCope Task, BCope Social Emote, Patient Verbal Intensity and Family Verbal Incidence - accounting for 62% of the variance of Total impact. Brief Cope Avoidance accounted for the highest portion again, as it did in the forward regression model. Of interest is the high contribution of BCope Task which was not detected in the forward model as well as the negative relationship with BCope Social Emote reflecting a reduction in Total impact scores for every increase in Social Emote scores.

RQ 2.4: What is the best set of predictors of risk for PTSD symptomatology (Total Score≥ 33) among coping strategies (Avoidance, Task, and Social/Emotional coping), the incidence and intensity of experienced physical and verbal abuse and demographic variables (gender, years of neurology experience and age)?

Forward and backward stepwise logistic regressions testing the full model against a constant only model was statistically significant with BC Avoidance, Family Verbal

Incidence and Family Physical Incidence reliably distinguishing between high and low risk for PTSD (Table 4.14). Logistic regression does not produce a true R^2 as does multiple regression but a pseudo-R^2 (Nagelkerke R squared) can be interpreted similarly. Nagelkerke R squared indicated 49% of the variance in PSTS symptomology was accounted for by the three predictors.

An additional approach to evaluating model fit is to examine the classification success of the model. The overall percentage for accurately predicting inclusion in the high PTSD symptomology group (true positives, i.e., sensitivity) was poor (41.2%) while accurately predicting inclusion in the low PTSD symptomology group (true negatives, i.e. specificity) was excellent (98.7%). Overall classification accuracy was good at 88.5%.

Table 4.13: Forward stepwise logistic regression of PTSD symptomology

Omnibus Tests of Model Coefficients					
	Chi-square	**df**	**Sig.**		
Model	2.840	1	.092		
Constant	49.284	12	.000		
Model Summary					
	Nagelkerke R squared				
Model	.490				
Classification Table[a]					
NTotalIESR			*Predicted*		
Observed		**Low PTSD**	**High PTSD**	**Percent Correct**	
Low Risk PTSD		78	1	98.7	
High Risk PTSD		10	7	41.2	
Overall Percentage				88.5	
Variables in Equation					
	Wald	**Sig.**	**Exp(B)**	**95% C.I. for Exp(B)**	
				Lower	**Upper**
BC Avoidance	14.099	.000	1.339	1.150	1.559
MFAVerbalINC	5.391	.020	1.276	1.039	1.567
MFAPhysicalINC	3.306	.069	1.807	.955	3.420
Constant	15.459	.000			

a. The cut value is .500

Table 4.14: Backward stepwise logistic regression of PTSD symptomology

Omnibus Tests of Model Coefficients					
	Chi-square	**df**	**Sig.**		
Model	44.909	6	.000		
Constant	49.284	12	.000		
Model Summary					
	Nagelkerke R squared				
Model	.616				
Classification Table[a]					
NTotalIESR			*Predicted*		
Observed		**Low PTSD**	**High PTSD**	**Percent Correct**	
Low Risk PTSD		78	1	98.7	
High Risk PTSD		6	11	64.7	
Overall Percentage				92.7	
Variables in Equation					
	Wald	**Sig.**	**Exp(B)**	**95% C.I. for Exp(B)**	
				Lower	**Upper**
Neuro Years	5.678	.017	.741	.579	.948
Age	3.165	.075	1.104	.990	1.232
BC Avoidance	11.408	.001	1.364	1.139	1.634
MFAVerbalINC	7.992	.005	1.443	1.119	1.860
MFAPhysicalINC	5.299	.021	2.365	1.136	4.922
MPatVerbal Intensity	4.006	.045	2.604	1.020	6.649
Constant	12.797	.000			

a. The cut value is .500

The Wald statistic in the full model reveals that BC Avoidance and Mean Family Verbal Incidence are both significant, therefore it can be inferred the two variables make a significant contribution to predicting PTSD symptomology, while Mean Family Physical Incidence only contributes a marginally significant (p = .069) amount to predicting risk for high PTSD symptomology. Reviewing the Exp(B) or odds ratio statistic it can be seen that BC Avoidance, Family Verbal Incidence and Family Physical Incidence are > 1 in value, indicating that when there is an occurrence of one verbal or

physical family incidence event, then the odds of belonging to the high symptomology PTSD group increases. Consequently, when a family verbal or physical abuse incidence occurs the odds are 27.6% and 80.7% respectively, that a neurology nurse will experience a high degree of PTSD symptomology. Similarly, the more a neurology nurse uses the Brief Cope Avoidance coping strategy the odds are 33.9% higher that they will exhibit higher PTSD symptomology. This implies that use of Avoidance coping may not be effective in dealing with the impact of verbal or physical abuse from patients and families.

A backward logistic regression was also run and results indicated a model with six significant predictors: Neuro Years, Age, BC Avoidance, Family Verbal Incidence, Family Physical Incidence, and Mean Verbal Intensity. Model fit indices indicated a significant Hosmer and Lemeshow, indicating that the model was a poor fit compared to the constant only model. However, Nagelkerke R squared was slightly higher at .616, indicating a moderately strong relationship between the predictors and the model prediction. The overall percentage in the classification table was slightly higher than the forward LR at 92.7%, with all of the gain in the high risk PTSD group, i.e., predicting true positives or sensitivity. The odds ratio for the six retained variables (Neuro Years, Age, BC Avoidance, Mean Family Verbal Incidence, Mean Family Physical Incidence, Mean Verbal Intensity) indicated five with Exp(B) scores > 1 indicating an increase in the odds of being in the high symptomology PTSD group with an occurrence of each verbal or physical family incidence event, a unit increase in intensity, use of avoidance coping or with each additional year in age. Consequently, when a family verbal or physical abuse incidence occurs there is a 44.3% and 137%, respectively, increase in the

odds of a neurological nurse having high PTSD symptomatology. When a patient's verbal intensity increases 1 point, there is a 160% increase in the odds of neurology nurses having high PTSD symptomatology. Similarly, when a neurology nurse's score on the Brief Cope Avoidance coping strategy increases by one point the odds are 36.4% that they will exhibit higher PTSD symptomology. Since the Exp (b) for Age is < 1, for each additional year in age, the odds of experiencing high PTSD symptomatology are decreased by 1%.

AIM 3: To evaluate coping strategies utilized by neurology nurses experiencing high versus low verbal and physical abuse from patients and families across selected demographic characteristics.

RQ 3.1: What is the difference on Avoidance, Task and Social/Emotional coping as measured by the Brief COPE Inventory between gender groups controlling for age and years of neurology experience?

Table 4.15: One-way ANCOVA descriptive statistics

Gender	**Dependent Variables [means(sd)]**		
	BCope Avoidance	**BCope Task**	**BCope Social Emotional**
Males	19(6.53)	17(6.74)	17.12(6.75)
Females	17.25(5.67)	14.79(5.98)	14.82(6.37)

Analysis of covariance results indicated no significant differences between males and females on the BriefCOPE Avoidance (p = .293), BriefCOPE Task (p = .224) or BriefCOPE Social Emotional (p = (.211) coping when controlling for Age and NeuroYears. Descriptive analyses indicated that, although non-significant, males had higher scores on all three subscales (Table 4.16). Since neither age nor years of experience as neurology nurse were significant covariates and the sample size for males

was small, Mann-Whitney U nonparametric analyses were conducted and confirmed no significant differences between genders on these three coping subscales.

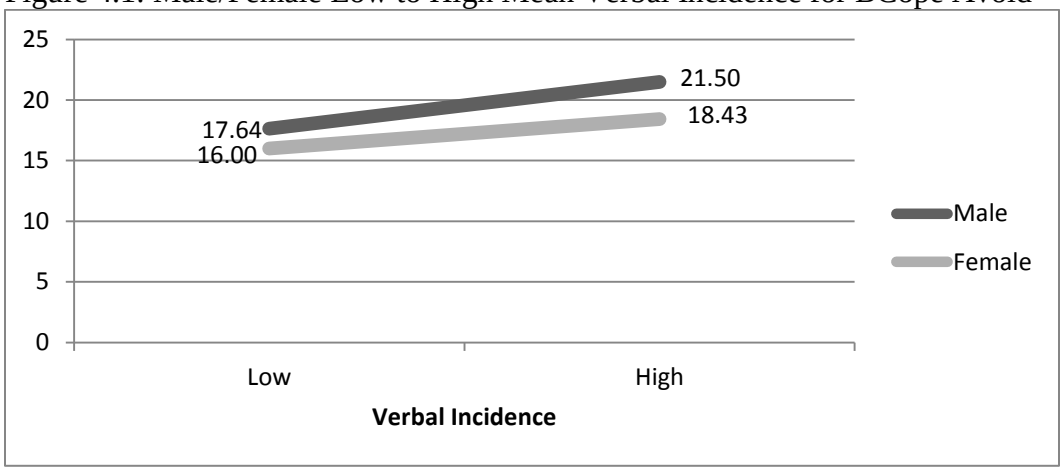
RQ 3.2: What are the differences in Avoidance, Task, and Social/Emotional coping, used by neurology nurses experiencing high versus low incidence, intensity of verbal and physical abuse from patients and families separately and high and low global impact across gender groups controlling for age and years of neurology experience?

RQ 3.2 used mean/median splits on incidence and intensity for dichotomizing those variables into high and low subgroupings. The clinical criteria of a score of 33 or higher for Total IES Score were used to signify high versus low PTSD risk. An examination of the resulting distribution using mean and median splits revealed no differences in groupings. Therefore all dichotomized variables are referenced as 'mean splits'.

Brief Cope Avoidance

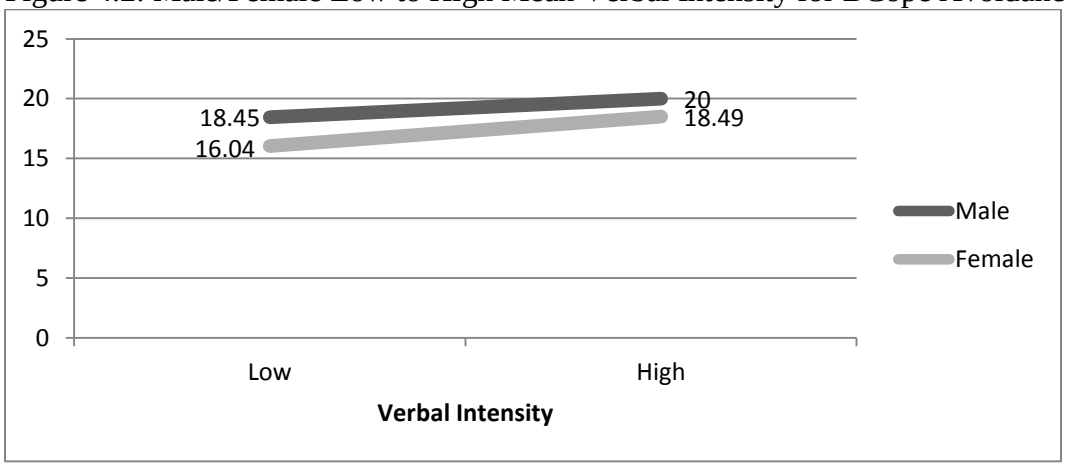
The first 2-way ANCOVA with Brief COPE Avoidance as the dependent variable and Gender and Mean Verbal Incidence as the two independent variables resulted in only a main effect for Mean Verbal Incidence ($F(1,111) = 4.578$, $p = .035$; $m_{verballow} = 16.32$ versus $m_{verbalhigh} = 18.76$) indicating higher use of avoidance for the high verbal incidence group compared to the low group. While not significant, there is a pattern of higher use of avoidance coping for males than for females at both high and low verbal incidence levels (Figure 4.1). Males start higher and stay higher.

Figure 4.1: Male/Female Low to High Mean Verbal Incidence for BCope Avoid



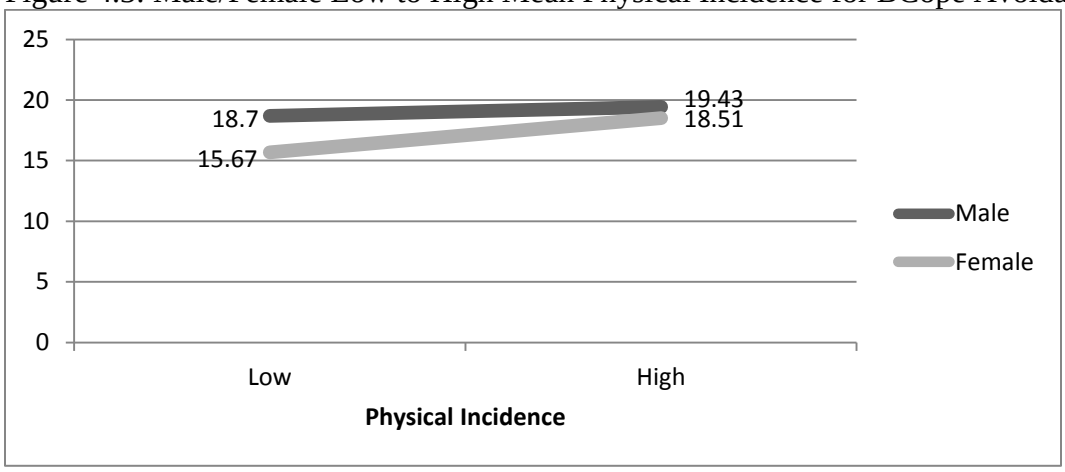
Analysis of Gender (2) x Mean Verbal Intensity (2) on Brief Cope Avoidance resulted in no significant main effects or interactions. However, the same pattern of higher avoidance scores for males at both high and low intensity groups was evident (Figure 4.2).

Figure 4.2: Male/Female Low to High Mean Verbal Intensity for BCope Avoidance



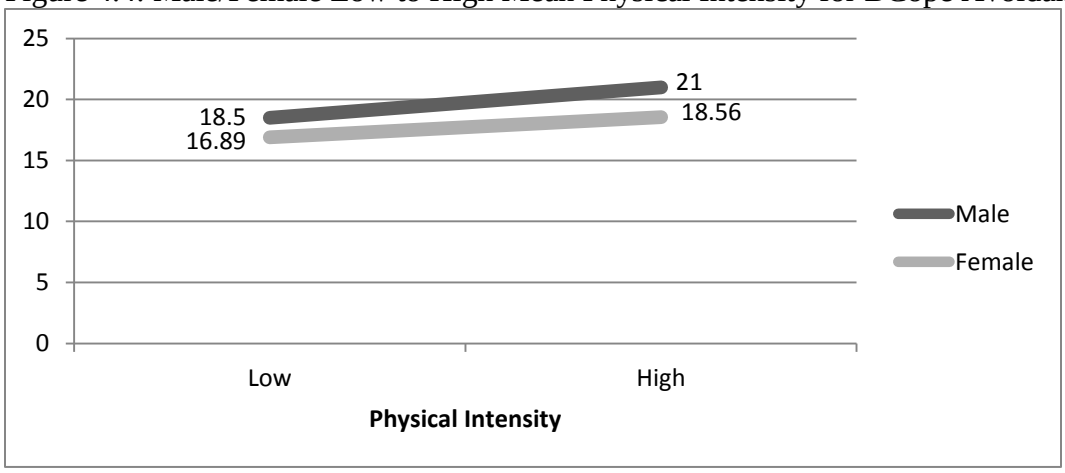
Analysis of Gender (2) x Mean Physical Incidence (2) on Brief Cope Avoidance resulted in no significant main effects or interactions (Figure 4.3). While the same pattern of higher avoidance scores for males was evident, it is worth noting that females were much more similar to males in the high avoidance group.

Figure 4.3: Male/Female Low to High Mean Physical Incidence for BCope Avoidance



Analysis of Gender (2) x Mean Physical Intensity (2) on Brief Cope Avoidance also resulted in no significant main effects or interactions with the same pattern of higher avoidance scores for males (Figure 4.4). There was a marginal significant effect for the covariate, Years of Neuro experience ($F(1,95) = 3.246$, $p = .075$) suggesting that experience may be a factor in use of avoidance coping.

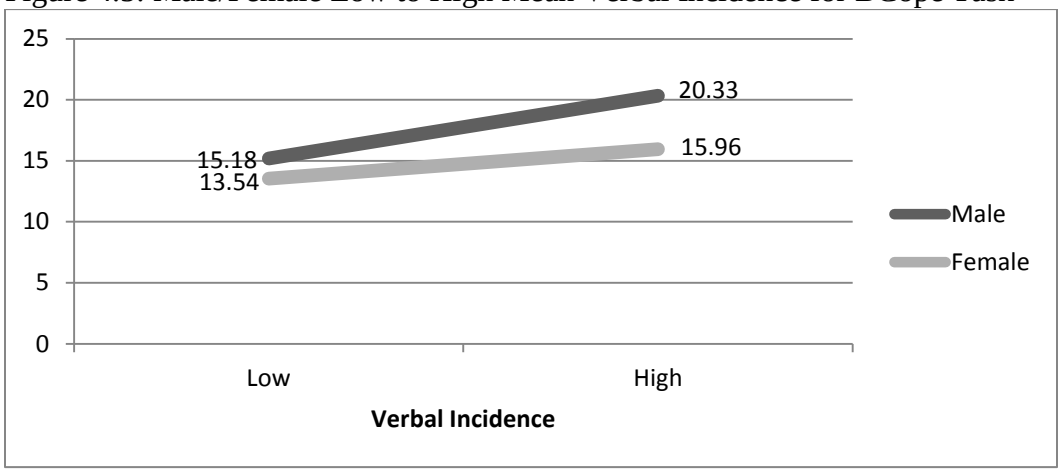
Figure 4.4: Male/Female Low to High Mean Physical Intensity for BCope Avoidance



Brief Cope Task

The analysis of Gender (2) x Mean Verbal Incidence (2) on Brief Cope Task indicated a marginal significant main effect for gender ($F(1,111) = 2.902$, $p = .091$; $m_{verballow} = 13.86$ versus $m_{verbalhigh} = 16.44$) reflecting the overall higher task coping scores for males compared to females as well as a main effect for Mean Verbal Incidence ($F(1,111) = 6.089$, $p = .015$; $m_{verballow} = 13.86$ versus $m_{verbalhigh} = 16.44$) indicating a significant difference between the high and low verbal incidences groups on task coping scores. While there was no interaction effect between gender and Mean Verbal Incidence, Figure 4.5 suggests that there may be some differences in use of task coping for males in the high incidence group compared to all other groups which the low sample sizes of males would have limited power to detect statistically.

Figure 4.5: Male/Female Low to High Mean Verbal Incidence for BCope Task



Analysis of Gender and Mean Verbal Intensity on Brief Cope Task resulted in no main effects or interactions but displayed the same elevations in task coping for males for both low and high verbal intensity groups (Figure 4.6).

Figure 4.6: Male/Female Low to High Mean Verbal Intensity for BCope Task

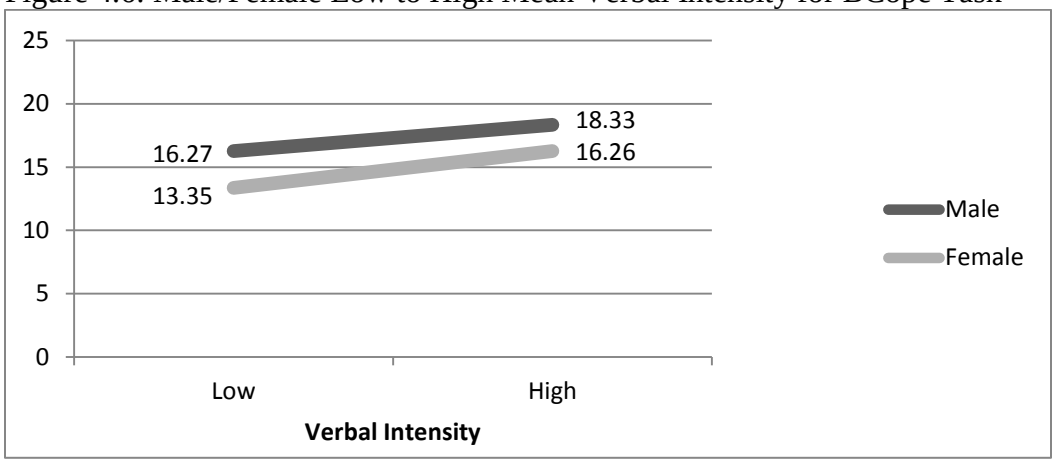


Figure 4.7 displays results for differences between Gender and Mean Physical Incidence on Brief Cope Task. There was no significant main effect for gender or interaction effect between gender and Mean Physical Incidence. However, a marginally significant effect for Mean Physical Incidence was found ($F(1,111) = 3.186$, $p = .077$) in which the high physical incidence group had marginally significantly higher task coping scores than the low group.

Figure 4.7: Male/Female Low to High Mean Physical Incidence for BCope Task

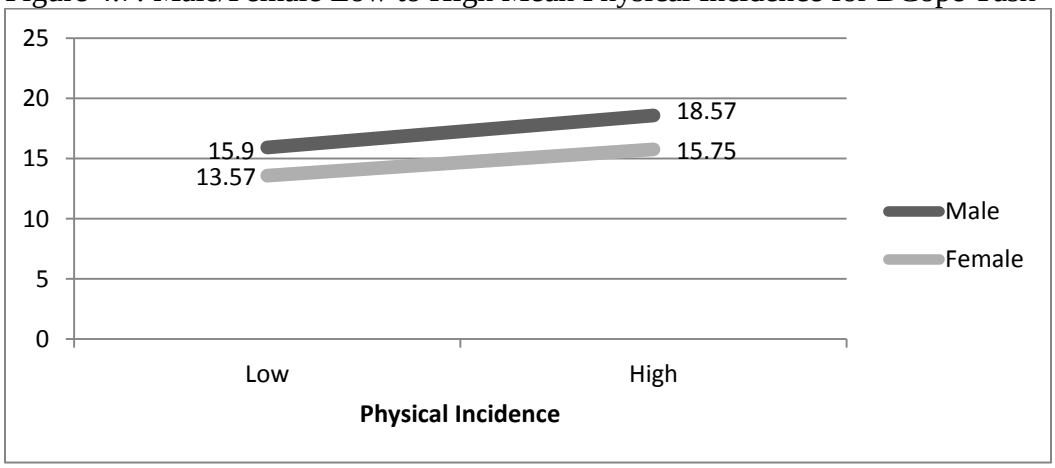
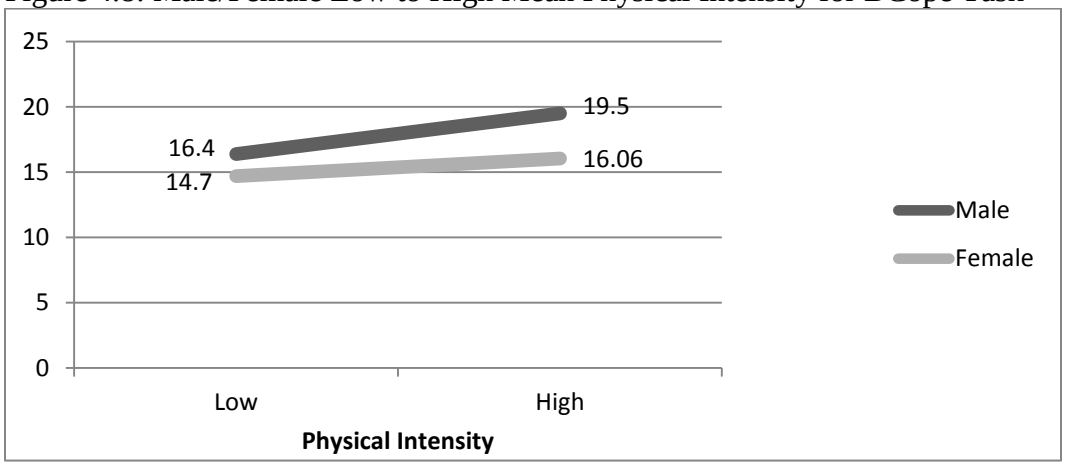


Figure 4.8 shows the same nonsignificant pattern of higher task coping scores for males on Brief COPE Task across Gender and Mean Physical Intensity. Of interest is the slightly larger magnitude of difference in the high group between the genders. Given the small sample size for males, such trends would indicate a closer scrutiny in larger samples.

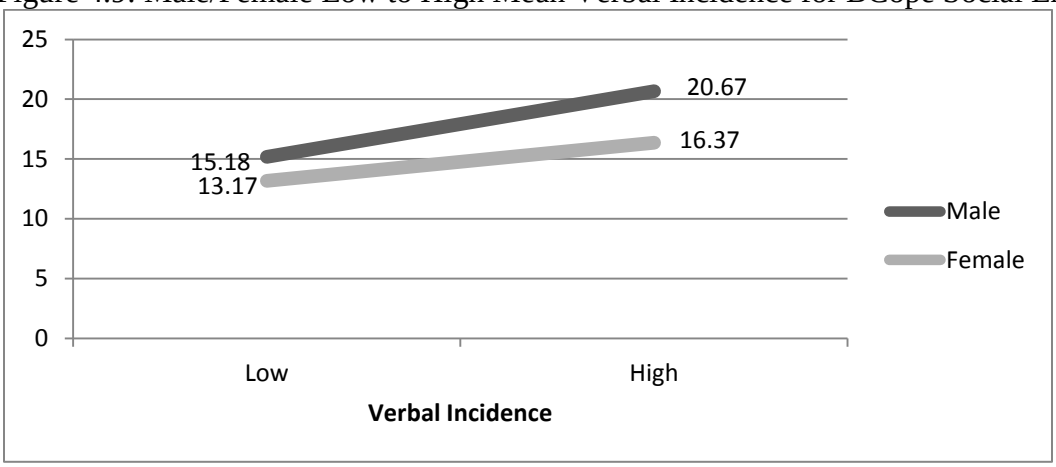
Figure 4.8: Male/Female Low to High Mean Physical Intensity for BCope Task



Brief Cope Social Emotional

Figure 4.9 displays the breakdown for Gender and Mean Verbal Incidence on Brief Cope Social Emotional. There was a marginally significant effect for gender ($F(1, 111) = 3.078$, $p = .082$; $m_{verballow} = 13.56$ versus $m_{verbalhigh} = 16.84$), no interaction effect, and a main effect for Mean Verbal Incidence ($F(1,111) = 7.008$, $p = .009$; $m_{verballow} = 13.56$ versus $m_{verbalhigh} = 16.84$) which indicates significantly higher social emotional coping scores for males than for females as well as higher social emotional scores in the high verbal incidence group compared to the low. Males start higher and stay higher.

Figure 4.9: Male/Female Low to High Mean Verbal Incidence for BCope Social Emote



Results for Gender x Mean Verbal Intensity and Gender x Mean Physical Incidence on the Brief COPE Social Emotional resulted in no main effects or interactions (Figure 4.10 and 4.11 respectively) with the same pattern of higher male social emotional scores in both groups.

Figure 4.10: Male/Female Low to High Mean Verbal Intensity for BCope Social Emote

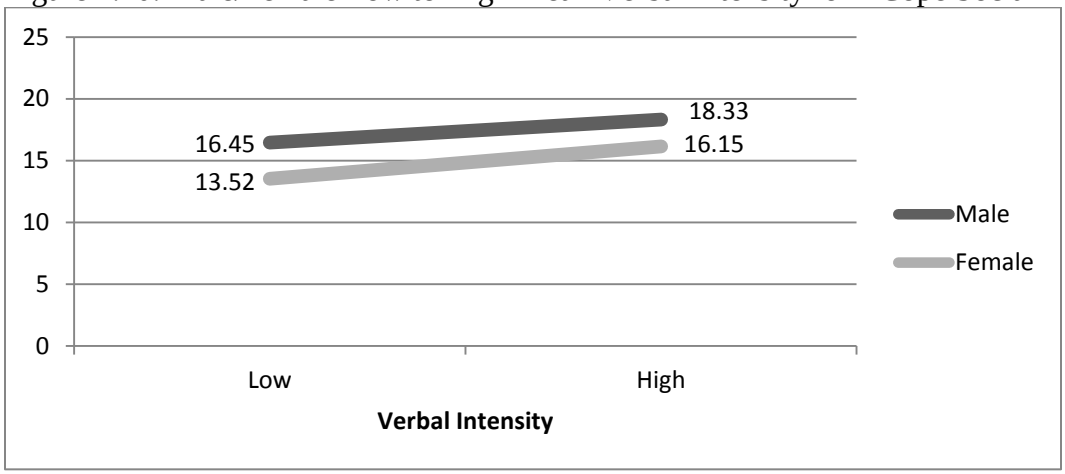
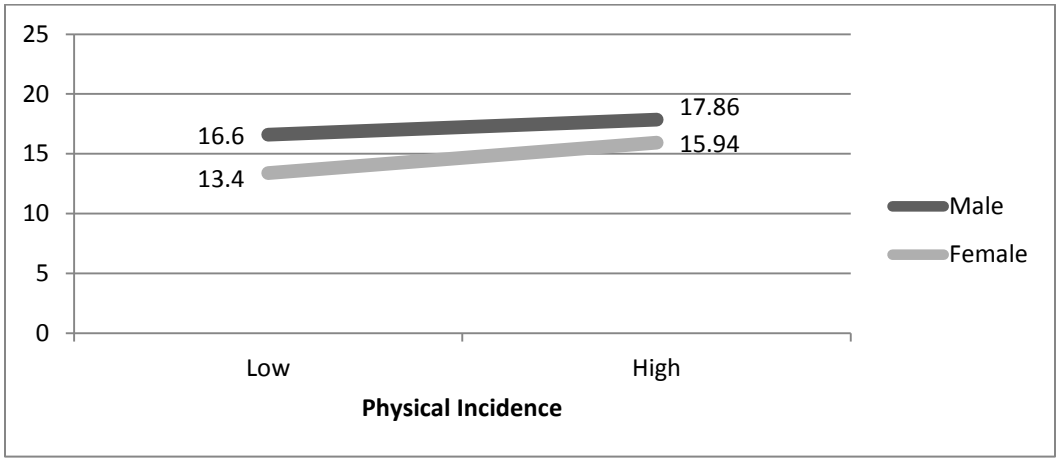
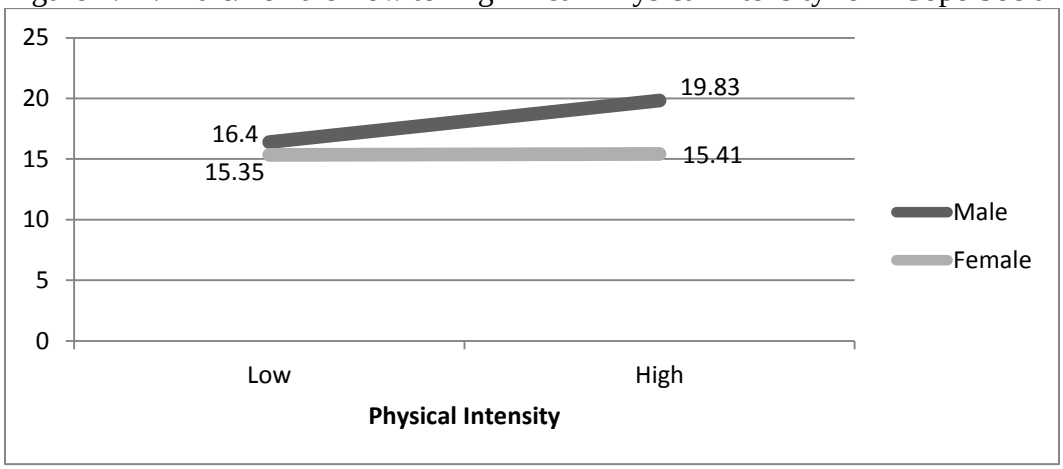


Figure 4.11: Male/Female Low to High Mean Physical Incidence for BCope Social Emote



While there were no significant main effects or interaction between Gender and Mean Physical Intensity groups on Brief COPE Social Emotional, a more pronounced pattern of gender similarity can be seen in the low physical intensity group and greater differences in the high physical intensity group (Figure 4.12).

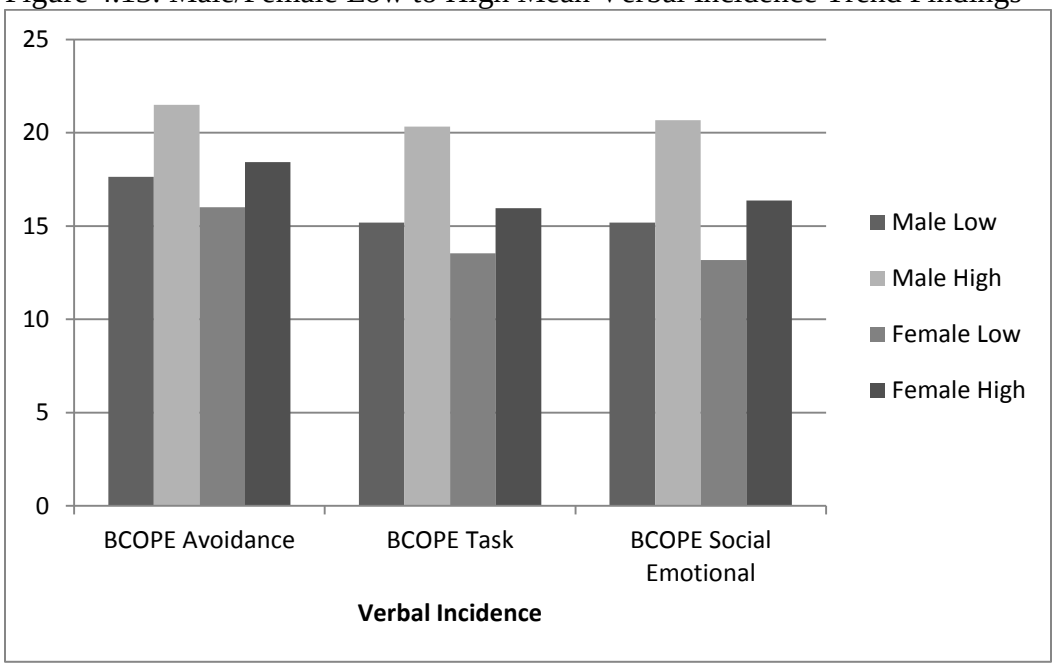
Figure 4.12: Male/Female Low to High Mean Physical Intensity for BCope Social Emote



The homogeneity of regression slopes and Levene's test of homogeneity of variance was assessed for each independent variable and no violations were identified.

An overall view of male versus female low to high verbal incidence trend findings for each of the three coping scales is seen in Table 4.13.

Figure 4.13: Male/Female Low to High Mean Verbal Incidence Trend Findings



SUMMARY

Analyses exploring relationships among coping scales, incidence, intensity and impact of physical and verbal abuse found a small significant correlation between years of neurology nurse experience and the Mean Patient Physical Incidence. Exploration of the relationships between coping scales, physical and verbal abuse incidence and intensity and measures of impact indicated a broad network of significant and positive correlations with high correlations between five predictor variables and the criterion variable. Partial correlation analyses revealed changes on three variables after controlling for age and years of neurology experience. Forward and backward stepwise multiple regression analyses to determine the best set of predictors of impact revealed a three predictor variable model versus a five predictor variable model in the backward stepwise regression analyses. Forward and backward stepwise logistic regression to select the best set of predictors of risk for PTSD indicated three variables identified in the forward

stepwise logistic regression as being predictors of PTSD symptomatology and six variables identified in the backward stepwise logistic analyses as predictors of PTSD symptomatology. Tests of differences between genders controlling for Age and NeuroYears on coping strategies found no significant differences on the three coping scales. Two-way analyses of covariance (ANVOVA) to compare coping strategies used by neurology nurses who experience high/low verbal and physical abuse and high/low impact across genders while controlling for Age and NeuroYears revealed a pattern of higher use of all three coping strategies for males than for females at both high and low levels (verbal and physical intensity and frequency groups). Although most results were nonsignificant or marginally significant due to small sample sizes for males, the persistence of the pattern strongly supports further scrutiny in future studies that evaluate gender differences.

Chapter 5: Discussion

Chapter 5 brings the presentation of this study to closure by further clarifying the findings. It offers some insights into the strengths and weaknesses of the study, the nursing implications and provides thoughts about future research opportunities to further explore verbal and physical abuse against nurses.

Nurses have always contributed to research studies involving their experiences with patients and families. This study was no exception. Neurology nurse participants contributed valuable information about their experiences of verbal and physical abuse from patients and families. It is known that abuse against healthcare workers, especially nurses, is increasing (Celik et al., 2007). One current focus of research is violence against nurses by patients and families. Although violence in the form of verbal and physical abuse against nurses is not a new topic of interest, it is a continuing problem and must be addressed through understanding the origins and implications to the nursing workforce.

DEMOGRAPHIC CHARACTERISTICS

The sample was largely white (39.3%) and Asian (34.8%), female (84.8%), and married/living with partner (65.2%). The age of participants ranged from 22 to 67 years, with a mean age of 39.96 years (sd=10.48). The majority of nurses (82.1%) had bachelors degrees. Years of neurology expeirence ranged from 1 to 34 years, with a mean of 8.28 years (sd=6.82). Comparatively, statistics for nursing demographics from the state of Texas Board of Nursing (2014) shows a 68.9% Caucasion nursing population, 8.1% Asian nursing population, 88.4% female population and 37.6% of nurses statewide have Bachelors degrees. These comparisons show much lower representation of Caucasians

and a much higher representation of Asians than is indicated by the state statistics; however this is not surprising as two of the of the three local hospitals in the study have programs supporting the training and development of Asian nurses abroad. The Caucasian difference, although lower than the state statistics, continues to represent the same Caucasian nurse majority. The representation of nurses with Bachelors degrees was also much lower than the state totals, but it did maintain the majority as the state statistics indicated.

VERBAL AND PHYSICAL ABUSE OF NEUROLOGY NURSES

It is reported that between 60% and 91% of nurses have experienced both verbal and physical abuse (Cox, 1987; Whitehorn et al., 1997; Rippon, 2000; Celik et al., 2007; Pich et al., 2010) which was strongly confirmed by the current study. Of the 112 nurse participants, 99.1% reported being verbally abused by patients and families combined. The percentage exceeds numbers seen in the current literature. This could be related to the geographical location of the data collection. Data was collected in acute care hospitals in a large metropolitan southern city. Daily these acute care hospitals experience large volumes of patients with very diverse backgrounds which can be contributory factors to verbal abuse against the neurology nurse population.

Physical abuse of nurses has been reported as greater than 79% in psychiatric facilities (Merecz et al., 2006), greater than 50% in the emergency department (Gacki-Smith et al., 2009) and 42% in one neurology study (Visscher et al., 2011). Neurology nurses in this study reported an 83.9 % physical abuse incidence by both patients and families, which supports and exceeds the current figures of physical abuse in the literature. It has been established that neurology patients are aggressive due to their

neurological condition, which is certainly a contributory factor for explaining the reason for the physical abuse.

This study confirmed that the neurology nurse population does experience verbal and physical abuse from patients and families. Previous studies had not focused exclusively on the neurology nurse population and now with this new data, neurology nurses can join in the current conversation on abuse against nurses with supportive evidence based research.

While it is imperative that we as nursing educators and clinicians understand the incidence, intensity, and impact of verbal and physical abuse, it is essential that the sources and reasons for the abuse are identified and examined through evidence based research. Although studies vary, verbal and physical abuse by patients and families against nurses have been identified as two of the more common sources of abuse in the clinical environment (Celik et al., 2007).

INCIDENCE, INTENSITY AND IMPACT

Results from assessment of the incidence, intensity and impact of verbal and physical abuse experienced by neurology nurses from patients and families revealed that verbal and physical abuse incidence for patients were reported as higher than those for families. This indicates that verbal and physical abuse occurs most often from patients. In addition, both patient and family verbal abuse were higher than physical abuse for either group indicating that the majority of the abuse from both patients and families directed at the neurology nurse is verbal abuse.

The patients' physical intensity was higher than families, and the verbal abuse intensity for families was higher than patients. This indicates that when patients become

physically abusive compared to the families, neurology nurses considered the patients abuse to be more intense while the verbal intensity from verbally abusive families was conveyed as more intense than patients. This could be due to the expectation that patients will more often engage in verbal abuse due to their distress and is more understood by nurses; however verbal abuse from families is perceived as more 'unjust' and unwarrented. The low incidence of physical abuse from families would inflate the intensity of physical abuse from patients from whom nurses are more likely to experience physical abuse. Such nuances are fertile grounds for further study and would be important determinants for prevention.

Of the 112 participants, 86.6% had Total IES-R scores ranging from 1 – 66 which indicates the presence of at least one stress symptom after a violent event. The data shows that the neurology nurse participants were more likely to use the items associated with the Avoidance Subscale more often when dealing with the verbal and physical abuse from patients and families.

Results from analyses of the relationships between the incidence, intensity and impact of experienced physical and verbal abuse and selected demographic characteristics revealed a small significant correlation between years of neurology nurse experience and the Mean Patient Physical Incidence ($r= 0.208$, $p<.028$) indicating a higher incidence of patient physical abuse as reported by older nurses. This could be due to the greater length of time in practice as a nurse or sensitization to actions that are perceived as abusive.

RELATIONSHIPS WITH COPING

There is a clear association between higher use of various coping strategies and higher impact, i.e., feelings of intrusion, avoidance, and hyperarousal. Coping with violent situations usually takes experience dealing with difficult patients and families. Employees, employers, patients, and families are all affected by abuse in the clinical environment. The function of coping can be described as managing or modifying demands that occur in the present environment or within oneself. The purpose of coping is not to master a demand, but to tolerate, diminish, accept, or disregard a demand. Because of the function and purpose of coping the type of coping employed in each situation continually varies due to reassessment of the demand and environmental variations that arise (Hays et al., 2006). Coping strategies utilized by neurology nurse participants from the Brief COPE Inventory have been reported in the current study. As this study has shown, there are certain coping strategies from the Brief COPE Avoidance subscale that are frequently utilized. Using avoidance techniques to cope with verbal and physical abuse may be useful in the short-term but eventually the nurse will need to address the abuse and the perpetrators of abuse if there is any hope of stopping or minimizing the abuse.

No significant differences were found between male and female coping strategy patterns on the Brief COPE Inventory when controlling for Age and NeuroYears. The current study revealed a pattern of higher use of all three coping strategies by males than for females at both high and low levels of verbal and physical abuse for both patients and families. This could reflect different relationships between male and female nurses with

their patients and families thus resulting in the differences in gender. This new information should be explored more thoroughly in future research.

PTSD SYMPTOMATOLOGY

The impact of verbal and physical abuse on neurology nurses is an important aspect of determining severity of the abuse and consequences for the nurse. Seventeen percent of ED nurses from one Cincinnati study scored high enough for a probable diagnosis of PTSD from patient and family related violence (Gates et al., 2011). A substantial degree of PTSD symptomatology has been established among the neurology nurse participants of this study with 16.1% scoring greater than 33 on the Total IES-R score indicating high PTSD symptomatology. These results represent a confirmation of the current literature. Predictors of risk for high PTSD symptoms were analyzed with three variables (Avoidance coping, Family Verbal incidence and Family Physical incidence) identified as predictors of PTSD symptomatology in the forward stepwise logistic regression and six variables (years of neurological experience, age, Avoidance coping, Family Verbal incidence, Family Physical incidence and Patient Verbal intensity) identified in the backward stepwise logistic analyses as predictors of PTSD symptomatology. This becomes helpful in identification and treatment of potential victims when trying to establish relationships between coping strategies and demographic data with PTSD symptomatology.

THEORETICAL FRAMEWORK RELATIONSHIP

Data collection for this study is based on the combined structure of phase 1 and 2 of the Ecological Occupational Health Model of Workplace Assault (EOHMWA)

developed by Levin et al. (2003). Aspects of each concept measured for this study were: 1) personal worker factors (demographic characteristics and years of neurology nursing experience) was collected by the demographic survey and the neurology nurse coping methods were collected by the Brief COPE Inventory; 2) workplace factors were represented by the neuroscience clinical setting; and 3) environmental factors identifies the persons (i.e., patient or family) enacting the physical violence against neurology nurses). These three dimensions contribute to the assault situation which includes type, (i.e., verbal or physical abuse), frequency and intensity of the assault which was collected by the Verbal & Physical Abuse Incidence and Intensity Scale (VPAIIS) and the Impact of Events Scale – Revised (IES-R). Results supported the model and suggest extensions of the theoretical implications can serve as a guide to future research.

STRENGTHS AND WEAKNESSES

The overarching strength of this research is that it attempts to fill a largely unexplored facet of the nurse-patient relationship in a specific clinical specialty. It is provocative in that it represents a very current topic of abuse against the people who care for sick patients. This topic creates a plethora of options for expanding the research to explore other nursing populations. The impact of this research could possibly result in a less stressful clinical environment, a more resilient nursing practice, and an improved safety standard for both the nurse and patient. Its importance is far reaching because of the potential to support nurses working in violent clinical environments around the globe. The data gathered in this study ideally contributes a new perspective and understanding for neurology nurses dealing with violence from patients and families and eventually help educate nurses in other fields.

The limited sample size represents a definite weakness. Using a healthcare database company for disbursement of recruitment emails to their neurology nurse population proved to be unsatisfactory and represents a warning to future researchers. The small number of male participants is also a weakness for the study. The significant findings related to males and suggestive patterns between genders would be better statistically supported with a larger sample of male neurology nurses. Implications for the development of preventive and remedial measures are substantial since training may consist of very different strategies for both managing patient and family abuse and coping with its impact.

IMPLICATIONS

Implications for nursing include not only the obvious need for further research about verbal and physical abuse of nurses by patients and families, but the opportunities and obstacles that coping with verbal and physical abuse from sick patients and their stressed out families presents on a daily basis. The data gathered in this study would ideally contribute a new perspective and understanding for neurology nurses dealing with violence from patients and families and eventually help educate nurses in other fields. The current and subsequent studies could establish evidence based practices that would lead to improved safety for the nurse, patient, and family member. It has the potential to positively change nursing practice, by changing the nurses' approach. The new approach includes using a calm rational demeanor, having a positive attitude and eventually utilizing effective coping strategies as indicated by this study and future evidence based research. The goal is to deescalate the violence and achieve a peaceful non-violent outcome. Nurses who gain understanding of violence by patients and families as a result

of a changed approach could positively affect the outcome of many volatile nurse, patient, family situations now and the future.

Recommendations for Future Research

Future research must certainly focus on the nature and details of verbal and physical abuse against nurses. Other areas of exploration includes expansion to to other popultions, such as cardiac, medical surgical and oncololy nurses as the focus of future studies. The study raised concerns about the differences in incidence and intensity of verbal and physical abuse between male and female nurses. A future study related to the causes of the differences in male and female outcomes when experiencing verbal and physical abuse from patients and families would be a logical trajectory for this research topic. Research focused on ethnic differences of nurses experiencing verbal and physcial abuse from patient and families is desperately needed. Future research should also include the identification of tested effective coping strategies used to deescalate patient and family violence directed a nurses with a goal of developing training and recommendations for coping with verbal and physical abuse.

Study Limitations

The results of this study discuss verbal and physical abuse of neurology nurses by patients and families. By the nature of the topic, some responses by participants may have been skewed as events of abuse tend to change over time and recollection of past events may not be well recalled by participants thus creating an uncertainty of the coping strategy used during the event. Findings are limited to the neurology nurse sample; therefore results may not be generalized to the greater nursing population. Because

potential participants received an email invitation to participate in the study, the inclusion/exclusion criteria may have been ignored by potential participants. The initial survey deployment through a national healthcare database company only yielded eight surveys. Because the data collection was amended and primarily achieved at local and regional acute care hospitals, the results may not be generalized to the national population. Because the study was conducted with English speaking participants only, findings may also be limited. The sample comprised primarily of females (84.8%) compared to males (15.2%). A sample comprised primarily of one gender may not have captured the experience of male neurology nurses.

CONCLUSIONS

This study has further supported the body of literature that suggests that verbal and physical abuse against nurses by patients an families is extensive and affects nurses, patients and families in detrimental ways. The findings have verified the prescence of verbal and physical abuse against neurology nurses and provided a forum for this nursing population to join in the discussion as legitimate victims of healthcare abuse. It has identified coping strategies utilized by neurology nurses, predictors of PTSD symptomatology, differences in genders based on types of violence and the effects of verbal and physical abuse on coping strategy utilization. Finally, it has shown a need for ongoing research on abuse against nurses caring for patients and families.

Appendix A: Bio-Demographic Survey

1. What is your gender?

   __Female
   __Male

2. What is your ethnicity?

   __American Indian/Alaskan Native
   __Asian/Pacific Islander
   __Black (African-American)
   __Hispanic (Non-White)
   __White (Caucasian)

3. What is your marital status? Please Choose One.

   __Single/Never Married
   __Married/Living with Partner
   __Separated/Divorced
   __Widowed

4. What is the highest **nursing** degree that you have completed? Please Circle One.

   __Associates Degree
   __Diploma
   __Bachelors Degree
   __Masters Degree
   __Doctoral Degree

5. What is your age?

6. Are you currently working as a full or part-time nurse caring for neurology patients?

7. How many years have you worked as a Neurology nurse?

Appendix B: Verbal & Physical Abuse Incidence and Intensity Scale (VPAIIS)

Below is a list of different types of Verbal and/or Physical Abuse you may have experienced from your patients and family visitors. Please reflect back over the past SIX MONTHS and think about any workplace verbal abuse or violent events that you have experienced from patients and their families. Please indicate how frequently (INCIDENCE) you have experienced each of these Verbal & Physical Abuse events from your patients and how often you have experienced each of these Verbal & Physical Abuse events from patients' families. Then indicate how stressful (INTENSITY) each event was for you.

Incidence
0 = Never
1 = Sometimes (25% of time)
2 = Frequently (50% of time)
3 = Often (75% of time)
4 = Always

Intensity
0 =Never Stressful
1 = Sometimes Stressful
2 = Frequently Stressful
3 = Often Stressful
4 = Always Stressful

Patient VERBAL ABUSE

__1. Yelled or Shouted at you
__2. Cursed or Swore at you
__3. Belittled or Humiliated you
__4. Spoke inappropriately, Nasty, or Rudely to you
__5. Wrongfully accused or Lied against you
__6. Were verbally threatened in a hostile way

Patient PHYSICAL ABUSE

__1. Threw objects or Spit at you
__2. Slapped or Punched you
__3. Pushed or Shoved you
__4. Kicked you
__5. Bit or Scratched you
__6. Stabbed you with sharp item or assaulted with weapon

Family VERBAL ABUSE

__1. Yelled or Shouted at you
__2. Cursed or Swore at you
__3. Belittled or Humiliated you
__4. Spoke inappropriately, Nasty, or Rudely to you
__5. Wrongfully accused or Lied against you
__6. Were verbally threatened in a hostile way

Family PHYSICAL ABUSE

__1. Threw objects or Spit at you
__2. Slapped or Punched you
__3. Pushed or Shoved you
__4. Kicked you
__5. Bit or Scratched you
__6. Stabbed you with sharp item or assaulted with weapon

Appendix C: Impact of Events Scale – Revised (IES-R)

Below is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you DURING THE PAST SIX MONTHS with respect to Verbal Abuse from patients, Verbal Abuse from families, Physical Abuse from patients, and Physical Abuse from families, how much were you distressed or bothered by these difficulties? This assessment is not intended to be a diagnosis. If you are concerned about your results in any way, please speak with a health professional.

0 = Not at all 1 = A little bit 2 = Moderately 3 = Quite a lot 4 = Extremely

__1. Any reminder brought back feelings about it.
__2. I had trouble staying asleep
__3. Other things kept making me think about it
__4. I felt irritable and angry
__5. I avoided letting myself get upset when I thought about it or was reminded of it
__6. I thought about it when I didn't mean to
__7. I felt as if it hadn't happened or wasn't real
__8. I stayed away from reminders about it
__9. Pictures about it popped into my mind
__10. I was jumpy and easily startled
__11. I tried not to think about it
__12. I was aware that I still had a lot of feelings about it, but I didn't deal with them
__13. My feelings about it were kind of numb
__14. I found myself acting or feeling like I was back at that time
__15. I had trouble falling asleep
__16. I had waves of strong feelings about it
__17. I tried to remove it from my memory
__18. I had trouble concentrating
__19. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart
__20. I had dreams about it
__21. I felt watchful and on guard
__22. I tried not to talk about it

Appendix D: Brief COPE Inventory

This research study is focused on how <u>you</u> have been coping with verbal and physical abuse as a Neurology nurse over the past SIX MONTHS. Specifically, I am interested in how you cope with Verbal or Physical Abuse from your patients and families. These items ask what you have been doing to coping with Verbal or Physical Abuse from patients and families during or after your shift. Obviously different people deal with things in different ways, but I'm interested in how you have tried to deal with it. Each item says something about a particular way of coping. I want to know to what extent you have been doing what the item says. How much or how frequently. Don't answer on the basis of whether it seems to be working or not—just whether or not you are doing it.

1 = I haven't been doing this at all
2 = I've been doing this a little bit
3 = I've been doing this a medium amount
4 = I've been doing this a lot

__1. I've been turning to work or other activities to take my mind off things.
__2. I've been concentrating my efforts on doing something about the situation I'm in.
__3. I've been saying to myself "this isn't real."
__4. I've been using alcohol or other drugs to make myself feel better.
__5. I've been getting emotional support from others.
__6. I've been giving up trying to deal with it.
__7. I've been taking action to try to make the situation better.
__8. I've been refusing to believe that it has happened.
__9. I've been saying things to let my unpleasant feelings escape.
__10. I've been getting help and advice from other people.
__11. I've been using alcohol or other drugs to help me get through it.
__12. I've been trying to see it in a different light, to make it seem more positive.
__13. I've been criticizing myself.
__14. I've been trying to come up with a strategy about what to do.
__15. I've been getting comfort and understanding from someone.
__16. I've been giving up the attempt to cope.
__17. I've been looking for something good in what is happening.
__18. I've been making jokes about it.
__19. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.
__20. I've been accepting the reality of the fact that it has happened.
__21. I've been expressing my negative feelings.
__22. I've been trying to find comfort in my religion or spiritual beliefs.
__23. I've been trying to get advice or help from other people about what to do.
__24. I've been learning to live with it.
__25. I've been thinking hard about what steps to take.
__26. I've been blaming myself for things that happened.
__27. I've been praying or meditating.
__28. I've been making fun of the situation.

Appendix E: Recruitment Email

Dear Fellow Neurology Nurse,

My name is Roy Trahan and I am a PhD Nursing Student at The University of Texas Medical Branch in Galveston, Texas. The reason for this email is to ask for your help as a fellow neurology nurse. I am currently working on my dissertation research which is a study of **Coping Strategies of Neurology Nurses who have Experienced Verbal and Physical Abuse from Patients and their Families.** I would really appreciate your participation in a 15 to 20 minute survey. I believe this research is important to us as neurology nurses and your participation and perspective would contribute valuable information to my research study.

I have worked as a Neurology Critical Care Nurse for eight years and know first-hand how difficult taking care of neurology patients and their families can be for our nurses. What I want to achieve with this study is an understanding of the frequency, intensity and impact that patient and family abuse has on my neurology nurse peers and how we all cope with the abuse. My hope is that by studying this topic, attention can be brought to our specialty and with that more support for those of us who directly work with and care for the neuro patient population.

There are few criteria that each participant must meet prior to taking the survey below and these are:

- You must be a Nurse currently working full or part-time in the U.S. caring for neurology patients
- You must be employed as a Neurology nurse for at least six months
- You must be a Neurology nurse who is at least 21 years of age

Important information that you should know about this survey is that your participation is voluntary and all information you provide will remain anonymous. Opening and completing the survey indicates your consent to participate. You may take this survey on any computer of your choice in any location of your choice. If you wish to end your participation prior to completion of the survey for any reason please simply exit the survey.

The following Survey Monkey© link will take you directly to the survey.

https://www.surveymonkey.com/s/KFZ6L25neuronurse

Once again, as a fellow neurology nurse, I really appreciate your willingness to participate. Thank you very much. If you have questions or concerns about this survey, please feel free to contact me at the email address indicated below.

Best regards,
Roy Trahan RN, BS, BSN
Doctoral Nursing Student
University of Texas Medical Branch
Galveston, Texas

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Vita

Roy L Trahan was born in Sulphur, La. in September 1967 to Brenda F. Trahan and the late Curtis L Trahan. He has been married to his husband, James T Miller of Hope, AR since May 2005 and they have been in a committed relationship for 20 years. Roy received his first Bachelor of Science degree in Marketing from McNeese State University in Lake Charles, La. in 1989, he received his Associates degree in Nursing from Houston Community College in 2000 and his Bachelor of Science in Nursing from The University of Texas Medical Branch in Galveston, TX in 2008. He worked as a staff and charge nurse in the Emergency Department at Memorial Hermann Southwest Hospital for two years, in the Neuro/Trauma intensive care unit at Memorial Hermann Hospital TMC for eight years, as a staff nurse in the Medical and Surgical intensive care unit at MD Anderson Cancer Center for two and a half years, and currently works in the intensive care float pool at Baylor St. Luke's Medical Center for the past eighteen months all in Houston, Texas. Also, he currently works as PBL Clinical Faculty for The University of Texas Medical Branch in Galveston, TX since January 2012.

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