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Appraisal, Coping, Social Support, Perceived Patient Safety and Intent to Leave in Emergency Department RNs Who Have Experienced Workplace Violence

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Appraisal, Coping, Social Support, Perceived Patient Safety and Intent to Leave in

Emergency Department RNs Who Have

Experienced Workplace Violence

A dissertation submitted in partial satisfaction of the

requirements for the degree Doctor of Philosophy

in Nursing

by

Rebekah Jay Howerton Child

2013

ABSTRACT OF THE DISSERTATION

Appraisal, Coping, Social Support, Perceived Patient Safety and Intent to Leave in

Emergency Department RNs Who Have Experienced Workplace Violence

by

Rebekah Jay Howerton Child

Doctor of Philosophy in Nursing

University of California, Los Angeles, 2013

Professor Janet C. Mentes, Chair

Workplace violence (WPV) has been cited as one of the most worrisome occupational

hazards for nurses (Gacki-Smith, Juarez, Boyett, Homeyer, Robinson & Maclean,

2009). Registered nurses (RNs) experience the majority of the incidences of WPV with

a 5% increase in incidence since 2006 (Wassell, 2009 and the highest levels of WPV

occur in psychiatric and emergency department settings (Chapman, Styles, Perry &

Combs, 2010). This study employed a cross-sectional design using surveys

administered online to Emergency Department RNs (ED RNs) via Facebook and staff

emails in multiple Southern California hospitals and universities. This study examined

the relationships between appraisal, coping styles, perceptions of organizational safety

and patient safety and intent to leave in ED RNs who have experienced WPV. The following tools were used: a modified version of Lazarus and Folkman's Ways of Coping questionnaire, the Jaloweic Coping Scale, the Survey of Perceived Organizational Support and the Safety Attitudes Questionnaire. Intent to Leave was measured using a two part question. A total of 190 surveys were initiated resulting in 159 complete. ANOVA statistics demonstrated a significant relationship between the appraisal question "You had to hold yourself back from doing what you wanted to do" and confrontive and fatalistic coping styles $F_{(4, 161)} = 2.50$, p=.045 and $F_{(4, 161)} = 2.73$, p=.031 respectively. The effects of fatalistic, evasive, emotive and optimistic coping were significant with organizational support, $F_{(2, 162)} = 3.40$, p=.036, $F_{(2,162)} = 3.837$, p=.024, $F_{(2, 162)} = 4.098$, p=.018 and $F_{(2, 162)} = 4.832$, p=.009, respectively. Pearson correlation coefficients showed a positive correlation between PWPV and VWPV $r(113)=.201$, p <.05. Negative correlations existed between social support and PWPV and VWPV $r(139)=-.210$, p <.05 and $r(129)= -.197$, p <.05 respectively. The analysis of the relationship between organizational support and perceived patient safety demonstrated a significant correlation ($rs[158] = 0.59$, p <.0001). The Spearman's rho revealed a significant relationship between VWPV and perceived patient safety ($rs[126] = -0.29$, p < .001). Only 13.7% of ED RNs reported an intention to leave their current job in the next year, 19.8% said maybe and 53.8% said no. However, of the "yes" and "maybe" responses 49.2% reported that their intentions to leave were related to WPV. This study demonstrates relationships between higher levels of WPV (both verbal and physical), certain coping styles, organizational support and perceived patient safety. As

levels of WPV increase, utilization of negative coping styles increases and perceptions of organizational support and patient safety decrease.

The dissertation of Rebekah Jay Howerton Child is approved.

Linda R. Phillips

Carol L. Pavlish

Michael A. Rodriguez

Janet C. Mentes, Committee Chair

University of California, Los Angeles

2013

DEDICATION

I would like to dedicate this dissertation to my husband and mother who never stopped believing or cheering me on. I'm done with school now. Seriously, I promise.

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# VITA/BIOGRAPHICAL SKETCH

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## PUBLICATIONS

Howerton Child, R.J. & Mentes, J. (2010). Violence Against Women: The Phenomenon of Workplace Violence Against Nurses. *Issues in Mental Health Nursing*, 31 (2), 89-95.

Poster Presentations:

Implementing a Psychiatric Education Initiative in the Emergency Department: One Way to Decrease Workplace Violence International Conference on Workplace Violence in the Health Care Sector, 2010 Amsterdam

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| 2012 | BCEN of the Year, Nominee |
|      | Emergency Nurses Association |

**Chapter One**

**Introduction**

Daily incidents of workplace violence (WPV) directly impact the health care industry and exposure to workplace violence (WPV) by hospital staff has been a major focus of numerous researchers, professional organizations and regulatory agencies. Groups most at risk for WPV include Emergency Department Registered Nurses (ED RNs). ED RNs are one of the job categories most at risk for experiencing verbal and physical WPV due to the nature of the ED environment and their consistent and close dealings with a variety of high risk patients in the most acute phase of their illnesses (Gacki-Smith et al., 2009; McPhaul & Lipscomb, 2004; NIOSH, 2002). Specific and accurate statistics of WPV events are difficult to describe due to the lack of adequate reporting mechanisms. Compounding the problem of inadequate reporting mechanisms is the fact that many ED RNs simply do not report incidents for numerous reasons including perceptions that WPV is "part of the job" and that nothing will be done about the events even if they are reported (Dalton & Eracleous, 2006; Farrell & Cubit, 2005; Ferns, 2006; Hampton, 2007; Pawlin, 2008; Phillips, 2007; Gates, Ross & McQueen, 2005; Ray, 2007).

The effects of WPV are numerous and include financial implications, physical and psychological repercussions and environmental hazards as well. The cost of WPV includes medical costs, nurse recruitment and retention, health outcomes and patient safety (Anderson & Parish, 2009; Luck, Jackson, & Usher 2007a; Roche, Diers, Duffield, & Catling-Paull, 2009). The average number of days away from work due to assault or other non-fatal violent acts is five days, although almost 25 percent of these injuries result in more than 20 days off of work (US Bureau of Labor Statistics, 2009).

The Department of Justice reports 21.9 violent victimizations per 1,000 RNs per year between 1993 and 1999; twice the rate reported by other medical professionals. This results in one researcher's estimated cost of $4.2 billion annually (Gallant-Roman, 2008). According to more recent estimates, an average of 500,000 nurses per year are victims of some type of WPV (US Department of Justice, 2009).

In addition to the monetary implications to hospitals and society; patient care and nursing retention are affected as well. Hampton (2007) asserts that WPV leads to decreased quality of patient care, low staff morale, and increased staff absenteeism. ED nurses reported being unable to work in the ED again after a violent incident, and increased "burn-out" or compassion fatigue (Gates et al., 2005; Hampton, 2007; Lewis, Dickinson & Contino, 2007; Phillips, 2007; Rosen, 2001; Luck, Jackson & Usher, 2007b). Jansen, Dassen & Jebbink (2005) found that 21% of RNs in one hospital had life endangering injuries due to WPV. Staff RNs with a history of assault also have higher rates of substance abuse, post traumatic stress disorder (PTSD) and other anxiety disorders (Quanbeck, 2006; Luck et al., 2007b).

While there have not been specific studies linking WPV and deleterious patient events, literature does suggest that health care staff subjectively feel that WPV compromises patient safety and nurses' intent to leave (Ditmer, 2010). Rosenstein and O'Daniel (2005) surveyed over 1,400 health care staff members and found that 60% of participants felt that at least one adverse event they were aware of was due to disruptive behavior. Environments where nurses were subjected to threatening or intimidating behavior has been linked with patient falls, medication errors and delay in treatment (Roche et al., 2009).

Current literature also examines the psychological repercussions of WPV such as burnout, compassion fatigue, high stress levels, decreased self-efficacy, and intent to leave nursing (AACN, 2004; APNA, 2008; AbuAlRub, Khalifa, & Habbib, 2007; Anderson, 2002; Bonner& McLaughlin, 2007; Chapman, Styles, Perry & Combs, 2010; Clements, DeRanierei, Clark, Manno & Kuhn, 2005; Kamchuchat, Chongsuvivatwong, Oncheunjit, Yip, & Santhong, 2008; Jackson, Clare & Mannix, 2002; May & Grubbs, 2002; Matthews, Harris, & Cumming, 2009). High stress levels resulting from an unsafe work environment can lead to higher occupational injuries, failure to follow safety procedures and increased absenteeism (Calabro & Baraniuk, 2003; Gillepsie & Melby, 2003). These safety issues may certainly contribute to an unsafe patient care environment (Bowers, Allan, Simpson, Nijman & Warren, 2009; Egel & Torino, 2006). Research suggests that approximately 48% of RNs are contemplating leaving the profession due to the issues listed previously (Armstrong, 2006). Managing a safe work environment that attempts to minimize stress, violence, and burnout are important to keep experienced and safe nurses in the workforce during these times of health care crisis.

**Theoretical Framework**

The theoretical frameworks that guided this study were Lazarus and Folkman's Stress, Appraisal and Coping (1984),  Albert Bandura's Social Cognitive Theory (1977, 1986) and Kelling and Cole's Broken Windows Theory (1996) (see Figure 1).

| Background Variables | → | Cognitive and Behavioral Processes | → | Outcomes & Behavior |
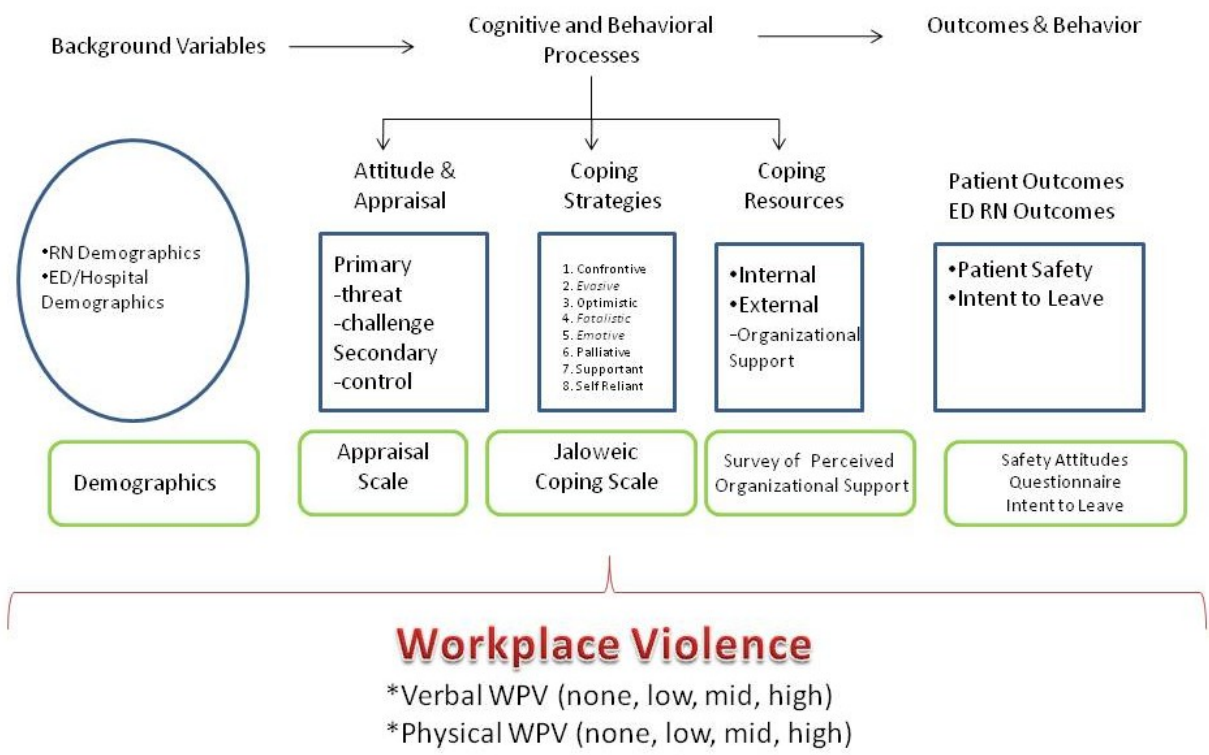
Figure 1.

Social Cognitive Theory asserts that one of the most important mediator of human behavior is human cognition (1977, 1984) and how a person is influenced and influences their environment. This concept of connectedness and reciprocal influences between human behavior and environment is critical for this study and is based on the premise that a person (patient) and the environment are mutual products of each other (Arnold, Chaney, Hough, Hughes, Nieswiadomy, & Watson, 2005). The ED RN does not exist in a silo independent of the environment which includes patients but rather is affected by conditions in the environment including incidents of WPV which could then subsequently affect others in the environment including patients.

Borrowing from the criminal justice literature, the Broken Windows Theory discusses how allowing lower levels of unacceptable behavior inadvertently encourages

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or condones higher levels of unacceptable behavior or crime (Kelling and Cole, 1996). This theory is adapted for this study in terms of the discussion of verbal WPV (VWPV) versus physical WPV (PWPV). There are mandated reporting procedures in numerous hospitals for PWPV but a paucity of literature which discusses the importance of preventing or ameliorating VWPV.

**Key Concepts**

**Appraisal.** Primary and secondary appraisal are key concepts in Lazarus and Folkman's theory, although difficult to measure. Primary appraisal is the moment when an individual decides if a stimulus is a threat or challenge, specifically if the stimulus is irrelevant, benign-positive or stressful. WPV is frequently referred to as "part of the job" by ED RNs implying that the actual stimulus of WPV may be perceived by many as an irrelevant stressor. This acceptance of the WPV as a normal daily stressor further compounds the problem of adequately addressing the numerous repercussions of WPV. Secondary appraisal is usually the concept that is measured in most research due to the difficulty of adequately assessing primary appraisal. Secondary appraisal is the cognitive decision on the course of action an individual will take once primary appraisal has been determined. In this study, secondary appraisal was measured using a modified version of Lazarus & Folkman's Ways of Coping Scale (1984).

**Coping.** The concept of coping has been researched extensively in relation to burnout, stress, physical and psychological health and much more (Hedlund, Ronne-Engstrom, Carlsson & Ekselius, 2010; Lin, Probst & Hsu, 2010). However, this concept has not been well researched in ED RNs who have experienced WPV and how coping affects other variables such as appraisal, social support or patient safety. Coping

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strategies that include conscious thoughts and behaviors are used to manage internal or external stressors that exceed one's existing resources and fall into one of three categories of coping with stressful situations as described by Lazarus & Folkman (1984).

Lazarus and Folkman relegated coping styles into adaptive and maladaptive but subsequent coping research has expanded on these concepts. One reason for researchers avoiding relegating coping into adaptive or maladaptive is that "successful" coping mechanisms are subjective as what may work well for one person may not work well for another (Rodrigues & Chavez, 2008). However, in western research avoidant coping strategies have generally been assumed to be negative as various cross sectional studies support that avoidant coping is positively associated with PTSD in war veterans and victims of Interpersonal Violence (IPV) (Krause, Kaltman, Goodman & Dutton, 2008). Also in IPV subjects, avoidant coping was associated with increased anxiety and feelings of helplessness (Bauman, Haaga & Dutton, 2008). In an international Australian study, researchers found that avoidance coping was linked to PTSD and decreased work potential and active cognitive coping was related to an increased work potential. The ability to use active coping styles not only increased the subject's ability to successfully return to work but also provided better social and family functioning. (Matthews, Harris & Cumming, 2009).

According to Wang, Wai Man Kong and Chair (2009), higher levels of job related stress affects the health of workers and decreases their quality of life. These negative impacts on health concurrently affect coping mechanisms and negatively affect a worker's ability to respond to job demands. The loss of the ability to successfully cope

with job demands adds to organizational inefficiency, higher staff turnover rates, increased absenteeism and decreased quality of patient care (Needham et al., 2004; Pisant, Lombardo, Lucidi, Lazzari, & Bertini, 2008; Wang, Wai Man Kong & Chair, 2009).

The Jaloweic Coping Scale (JCS) will be utilized for this study and avoids defining the eight coping styles measured as adaptive or maladaptive. The eight coping styles are confrontive, evasive, optimistic, fatalistic, emotive, palliative, supportant and self-reliant (Jaloweic, Murphy & Powers, 1984). Emotive, avoidant and fatalistic coping styles have been linked to negative physical and psychological outcomes in patients but not researched in ED RNs.

**Social (Organizational) Support.** Social support can be defined in numerous ways and includes support received from family, friends, peers, and employers. The type of support that is the variable of interest in this study is organizational support. In Brazilian oncology nurses, higher levels of managerial support was linked to decreased levels of stress and increased positive coping mechanisms, lower levels of burnout and increased quality of patient care (Rodrigues & Chavez, 2008). Managerial and organizational support has been associated with lower incidents of verbal and physical incidents of WPV as well (Peek-Asa, Cubbin, & Hubbell, 2002). In a study of Emergency Medical Services personnel, Essex and Scott (2007) reported that organizational support from peers and management was linked to 'positive' coping strategies. Organizational support is measured in this study utilizing the Survey of Perceived Organizational Support (SPOS) developed by Eisenberger , Huntington, Hutchison & Sowa (1986).

**Patient Safety.** The National Patient Safety Foundation defined patient safety as "the avoidance, prevention and amelioration of adverse outcomes or injuries stemming from the processes of health care" (Kohn, Corrigan, & Donaldson, 200, p.57). The concept of patient is well discussed in research literature and is a cornerstone of healthcare. To date, there has been little research as to how WPV affects the ED RN and subsequent patient safety. Hospitals have a responsibility to provide safe environments for patients and staff which includes protecting all who use the system from WPV (OSHA, 1994, JCAHO, 2006, 2010). Dealing with WPV has been discussed by some researchers to be a distraction not only in the short term but also in the long term when staff may be experiencing PTSD, anxiety, burnout and compassion fatigue (Anderson, 2002; Chapman et al., 2010; Clements et al., 2005). Distractions have been linked to increased medication errors, poor communication handoffs, near misses and adverse events (Ridley, Wilson, Harwood & Laschinger, 2009; Rocheet al., 2009; Gates, 2001; Hampton, 2007; Lewis et al., 2007; Phillips, 2007; Luck et al., 2007a; Quanbeck , 2006). O'Brien-Pallas, Duffield & Alksnis (2004) reported increased delays in nursing interventions when there was individual or unit based WPV. To date, there is a gap in the literature regarding possible links between WPV and patient safety.

Patient safety has multiple dimensions including processes that should identify, evaluate and decrease hazards as best possible. One of these processes used to evaluate safety should be assessing the staff members and the human factors  who are dealing with high stress environment such as WPV on a daily basis (Dilek & Aytolan, 2008). The concept of patient safety is measured here with the Safety Attitudes Questionnaire (Modak, Sexton, Lux, Helmreich & Thomas, 2007) which has been

utilized in the aviation industry and was subsequently modified for use in the health care setting.

**Intent to Leave.** Buerhaus, Auerback and Staiger (2009) predict that even with the current economic upsurge resulting in more RNs re-entering the workforce, the nursing shortage will still reach upwards of 260,000 vacant positions by 2025. With the American population increasing and with individuals living longer than ever, the need for professional and competent RNs is essential for patient safety. Hospitals are making every effort to recruit and retain their nursing force. With WPV being a contributing factor to job dissatisfaction, it is imperative to recognize the dangerous implications of this phenomenon and attempt to understand and buffer the harmful effects it may have on ED RN staff.

While there have not been specific studies linking WPV and deleterious patient events, literature does suggest that health care staff feel subjectively that WPV compromises patient safety and nurses' intent to leave (Ditmer, 2010). Rosenstein and O'Daniel (2005) surveyed over 1,400 health care staff members and found that 60% of participants felt that at least one adverse event they were aware of was due to disruptive behavior. Environments where nurses were subjected to threatening or intimidating behavior has been linked with patient falls, medication errors and delay in treatment (Roche et al., 2009).

Intent to Leave will be measured by a two part question asking the participant's intent to leave. This has been used successfully with other studies and tools including The Practice Environment Scale –Nursing Work Index (PES-NWI) (Alexander,

Lichtenstein, Oh & Ullman, 1996; Gardner, Thomas-Hawkins, Fogg & Latham, 2007; Ito, Eisen, Sederer, Yamada & Tachimori, 2001).

**Methodology**

This study is a cross-sectional study using a survey design powered by Survey Monkey. The inclusion criteria included (1) currently employed in the ED, (2)  worked longer than six months in the ED and (3) willing to participate in the study. The study will be advertised via social media (Facebook and nurse oriented websites) as well as via staff and student e-mails in numerous Southern California hospitals and universities. The goal sample size of 150 was estimated using  the *a priori* analysis computed with G*Power version 3.1.3 (Erdfelder, Faul & Buchner, 1996) with a two tailed test at the .05 alpha level with 0.8 power and an effect size of 0.33 (medium to large $f^2$). Microsoft Excel and SPSS 19.0 will be used to analyze the data.

**Purpose of the Study**

The purpose of this study is to explore the possible relationships between appraisal, coping, social (organizational) support, perceived patient safety and intent to leave in RNs who experience WPV in the ED.

Therefore, the specific aims of this study are:

1. Describe frequency, types and perpetrators of WPV in ED RNs.

2. Describe types of appraisal in ED RNs who have experienced WPV.

3. Analyze relationships between appraisal and coping.

> Hypothesis 3a.There will be significant relationships between the four appraisal questions and coping styles.

4. Analyze relationships between levels of WPV, coping, and organizational

support.

Hypothesis 4a. ED RNs who experience higher levels of WPV will report a higher level of 'acceptance of WPV' via measurement of appraisal scale.

Hypothesis 4b: ED RNs who experience higher levels of WPV will report higher utilization of negative coping styles.

Hypothesis 4c: ED RNs who experience higher levels of WPV will report lower levels of perceived organizational support.

5. Analyze relationships between nurses' perceptions of organizational support and their perceptions of patient safety.

Hypothesis 5a.ED RNs who report higher levels of organizational support will report higher levels of perceived patient safety.

Hypothesis 5b. ED RNs who report lower levels of organizational support will report lower levels of perceived patient safety.

6. Analyze relationships between levels of WPV and intent to leave in ED RNs.

Hypothesis 6a. There will be a significant relationship between ED RNs who experience higher levels of WPV and intent to leave.

By increasing our understanding of these variables, the researcher aims to provide data to refine existing interventions or develop new multidisciplinary approaches for reducing impact of WPV on ED RNs, other ED staff and patients.

**Remaining Chapters**

Chapter two of this dissertation will discuss in detail the methodology employed for this study and is titled "Utilizing Facebook and Participant Information Clips to

Recruit Participants for Research in Emergency Department Registered Nurses."

Chapter three will discuss the concepts and data analysis of WPV, appraisal, coping

and social (organizational) support and is titled "Appraisal, Coping Styles and

Organizational Support in ED RNs Who Have Experienced WPV." Chapter four will

discuss the concepts and data analysis of WPV, organizational support and patient

safety, titled "Workplace Violence, Organzational Support and Patient Safety in

Emergency Department RNs." In conclusion, chapter five will provide a review of

subsequent chapters with a discussion of implications for future research and policy in

the arena of WPV and the ED RN.

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**Chapter Two**

**Utilizing Facebook and Participant Information Clips to Recruit Participants**

**for Research in Emergency Department Registered Nurses**

Using the Internet to conduct different forms of research been discussed in the academic and corporate literature since the late 1990s. As the Internet has become more interactive with "Web 2.0" technology, social media and social networking sites (SNSs) have been identified as having possible roles in advertising and recruiting research subjects, implementing studies and disseminating information (Neiger et al., 2012; Scanfield, Scanfield & Larson, 2010; Thackeray, Neiger & Keller, 2012). Profit and nonprofit businesses and corporations have already capitalized on this new technology to elicit customer feedback, conduct market research and manage brand identities. The non-academic world has lessons to teach academic researchers regarding mass communications. These lessons apply to advertising, recruiting and disseminating research to the public in innovative ways.

This paper will address a variety of facets of social media and technology use within the domains of private corporations and public, academic research. A brief discussion of the history of advertising and communication utilizing the Internet will be presented to provide an understanding of the trajectory of social media and implications for recruitment in general. This paper will then focus on the researcher's experience recruiting subjects via SNSs, specifically Facebook (FB), including limitations and advantages.

**Using the Internet to Conduct Research**

Historically most companies have advertised and communicated with their consumers in two ways: either face to face or through vertical marketing. Companies would develop a campaign to market or advertise their services and then present it to the masses. The public would then decide if the product or service was worth pursuing. Customer feedback was limited to slow moving technology such as comment cards or calling customer service phone lines directly (Blanchard, 2011). This type of predominantly one way communication is referred to as "vertical marketing." In the late 1990's with the introduction of the Internet, or the Web 1.0 as it is also termed, the role of information seeking and advertising began to change. However, web pages were still static with limited interaction with end users and this type of advertisement was still considered another type of vertical marketing (Blanchard, 2011; Thackeray, Neiger & Keller, 2012).

Vertical marketing also includes word of mouth advertising. Word of mouth endorsements of products or services were usually limited to the person's friends, neighbors, families, or acquaintances. A finite number of people could be told about a service due to geographical and technological barriers. However, word of mouth advertising, similar to snowball sampling in the research domain, has always had more impact on the human psyche than corporate designed marketing campaigns (Blanchard, 2011).

In 2004, the term "Web 2.0" was coined and marketing and communication strategies began to evolve from "passive consumption to active creation of content" (Scanfield et al., 2010, p. 182). The Internet became much more interactive and public

driven as the public discovered that the Internet could be used to post content that was of immediate personal interest resulting in instantaneous communications. In essence, social media was born. Social media is defined as "a group of Internet based applications that allows individuals to create, collaborate, and share content with one another" (Neiger et al., 2012, p 165).

By 2015 an estimated 3 billion or more individuals and corporations will have some type of social networking account (Thackeray, Neiger, Hanson & McKenzie, 2008). Categories of social media include forums and message boards, review and opinion sites, social networks, blogging and microblogging, bookmarking and media sharing (Neiger et al., 2012). SNSs include Facebook (FB), Twitter, LinkedIn, MySpace and YouTube. This new technology has allowed consumers to "engage collectively in conversations that lead to the generation of online content and collective intelligence" (Thackeray et al., 2008, p.339).

Communications between organizations and society has now moved from a unilateral, vertical approach to a bidirectional one. Communications now move fluidly among people and their 'social network' and people can communicate directly and instantaneously with customer service, administrators and even researchers. The geographic barriers that once limited word of mouth endorsement have been demolished, leading to a concept referred to as "viral marketing" (Thackeray, Neiger, Hanson & McKenzie, 2008). Viral marketing encourages the sharing of information among large groups of people at lightning speed. Not only does viral marketing happen quickly, but carries more credence with consumers as the individuals recommending the product are considered to be from a like group or mindset (Blanchard, 2011; Thackeray,

Neiger, Hanson & McKenzie, 2008). Scanfield and colleagues (2010) state that receiving information or a recommendation from a peer or "a person like me" is "on par with their trust of industry experts" (p. 182).

People are not only using social media to share their own experiences but also to seek information. Two avenues are discussed in the literature with regard to methods of connecting with Internet technology: engagement and passive information seeking. The concept of "engagement," as discussed by Neiger and colleagues (2012), refers to the measurement of linking social media to action and can be low, medium and/or high. Low engagement is when people agree or acknowledge preference for a content area, but do nothing else. Medium engagement refers to people creating and sharing content that influence others (i.e. the "Like" and "Share" feature on FB). High engagement refers to participation in interventions beyond the social media site such as volunteering or even participating in a research study (Neiger et al., 2012). According to Anderson, Fagen, Woodnutt and Chamorro-Premuzic (2012), passive information seeking on FB includes reading peoples' or group "Walls" or status update pages without actively participating in any discussion.

The historic need for people to participate in mass media for diversion and personal needs is now blending with the need to participate in virtual communities via social browsing and searching for web pages and sites that are of personal interest and value to the individual (Anderson, Fagain, Woodnutt and Chamorro-Premuzic, 2012). In fact, Pelling and White (2009) suggest that the self-identity of a younger FB user is closely linked with their Internet use as a way to express themselves and belong to other peer groups and like minded communities. According to these researchers, the

need for people to belong to respected social groups can lead them to participate in social networking activities which simultaneously accomplishes dual goals of establishing a valued self-identity and developing increased feelings of belongingness with others (Pelling & White, 2009). This supports the idea that people are not only using sites such as FB to 'surf the web' but also as a core component of validating and expressing who they are as people (Anderson, Fagan, Woodnutt & Chamorro-Premuzic, 2012; Nadkarni & Hoffman, 2012).

SNS are not just limited to social and corporate uses. SNS are also being used by consumers and professionals for various purposes in the health care field.  Sixty percent of state public health departments now use at least one social media application. One-third of adults use social media to obtain health information (The Nielsen Company, 2011). SNSs are being used by government run institutions such as the Centers for Disease Control (CDC) and the Department of Health (Grier & Bryant, 2005). The CDC and Department of Health have utilized social networking and marketing to promote a variety of health improvement initiatives including increasing fruit and vegetable consumption and promoting physical activity (Grier & Bryant, 2005).

Scientists have been using the internet to conduct research since the late 1990s. A variety of research methodologies have been used in internet-based research ranging from cross sectional studies to randomized clinical trials.  For example, McAlindon, Formica, Kabbara, LaValley and Lehmer (2003) used the Internet to conduct a randomized clinical trial for osteoarthritis sufferers with good results. However, they did not use SNSs. Jones, Baldwin & Lewis (2012) constructed a FB page dedicated to reducing the incidence of Chlamydia among 15 to 24 year-olds. They concluded that

social media may be an effective to promoted positive behavioral changes among this population while providing anonymity about potentially stigmatized topics such as sexually transmitted infections.

Saidinejad, Teach & Chamberlain (2012) assessed the preference of families in an urban pediatric emergency department for receiving follow up and discharge instructions. Although their results demonstrated that parents preferred getting information both in written form and via email, the authors  advocated for the use of social media to disseminate health care information and as a platform for communication between health care providers and their patients. The authors stated that using social media and other electronic means is logistically and financially feasible and in line with the National Institutes of Health and Agency for Health Quality and Research goals of improving patient access to health care information via Internet technology (p. 553).

Limited research focuses on the use of SNSs such as FB and Twitter as actual research modalities. However, SNSs like Twitter have been used in research to ascertain certain dental public health behaviors (Heaivilin, Gerbert, Page, & Gibbs, 2011) and also to evaluate the public's perception, use and misuse of antibiotics (Scanfield, Scanfield & Larson, 2010). Heaivilin et al., (2011) reported that using Twitter for research of dental pain had numerous advantages such as collection of real time data thereby eliminating recall bias or an observer-expectancy effect. Other advantages include the ease with which people can use Twitter with respect to smart phones and tablets and that the users are representative of a global community. SNSs like Twitter

and FB have been discussed as useful for public health surveillance but still requires more feasibility studies (Eke, 2012; Heaivilin et al., 2011).

Limitations to using Twitter in research are that the global community represented is limited to those who use Twitter. Another limitation discussed by multiple authors is the unknown specific demographics of particular posts thereby limiting the ability to generalize to specific populations (Eke, 2012; Heaivilin et al., 2011; Ramo & Prochaska, 2012; Scanfield et al., 2010). A limitation discussed by Eke (2012) is the inability to determine the exact context in which posts are made to Twitter feeds which confounds obtaining data using key words.

Ramo and Prochaska (2012) used FB to recruit subjects for a smoking cessation study via paid FB advertising. These authors found FB to be efficacious and cost effective. Recruiting participants via FB required minimal staff to design and implement their research recruitment efforts and campaign. Using FB methods also took less time and more costs effective than more traditional methods such as newspaper or radio advertising and hired survey sampling companies. The financial feasibility reported by Ramo and Prochaska (2012) was impressive. Completed surveys cost $4.28 per participant as compared to a prior similar study by the authors which cost $42.77 per survey when using an Internet marketing company. However, to this researcher's knowledge, no one has discussed the use of the free functions of FB to recruit research subjects.

**Why use Facebook for Research Subject Recruitment?**

Americans are spending more time on the Internet, specifically sites like FB. Approximately 79% of American adults report using the Internet (Brenner, 2012) and

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spend one-third of their online time communicating via social networking sites (The

Nielson Company, 2011). According to the Pew Report (Brenner, 2012) FB is by far the

most popular online SNS and accounts for 92% of all SNS activity. FB was launched on

February 4, 2004 and is a platform in which users can establish a virtual identity and

connect with people, topics and groups important to them. As of 2011, FB had 750

million active members internationally (Anderson, Fagain, Woodnutt and Chamorro-

Premuzic, 2012). The average FB user has 100-200 friends, is connected to 80

community pages, groups and events and spends approximately 55 minutes per day

posting updates and recommendations, sharing links and endorsing products

(Blanchard, 2011; facebook.com, 2011).

Facebook is becoming more diverse as the demographics of who is utilizing

social media and SNSs are changing. Once limited primarily to those who had access to

stationary computers, mobile technology is changing the age, race and gender of SNS

users.  In 2008, 33 years was the average age of SNS users. As of 2010, the average

SNS user's age increased to 38 (Facebook, 2011; Madden & Zickhur, 2011). Initially,

the primary users of SNS websites were white Americans using these sites on

stationary computer systems. As mobile applications and SmartPhones developed,

more minorities have become involved in these sites as well (Madden & Zickhur, 2011;

Neiger et al., 2012). The diversification of mobile technology has contributed greatly to

the expansion of SNS.

**Facebook Recruitment Methodology for Researching Workplace Violence (WPV)**

**in Emergency Department Registered Nurses (EDRNs)**

The nature of emergency nursing is fast paced and constantly evolving which may attract personality types that are more likely to adopt new and innovative technologies. Given the nature of the target population, this researcher's opinion was that an internet-based study would yield more participants than any other type of survey methodology due to the ability of staff to quickly access and complete the survey. Even more innovative than merely using the internet to host the survey, was to advertise the study by advertising on FB. The researcher anticipated this recruitment technique would reach more EDRNs than more traditional means such as flyers in the break room or face to face recruitment based on anecdotal comments by EDRNs.

This study was conducted using a cross-sectional survey design. IRB approval was obtained from the University of California, Los Angeles. Utilizing this venue to recruit research participants is relatively new, yet the demographics of ED nurses suggested FB had untapped potential for recruitment.

Specifically, in the Emergency Nurses' Association (ENA) 2011 Emergency Department Violence Surveillance Study, most participants were in the 35-54 year age range (67.8% of the sample) and 17.7% were in the 25-34 age demographic (Gacki-Smith, Juarez, Boyett, Homeyer, Robinson & MacLean, 2009). The ENA study utilized the Internet (email and advertisements on their web page) but did not focus on FB users specifically. The age range for FB users is similar to the ENA sample although the ENA sample did not tap the younger respondents as much, which was this researcher's intention as this valuable group's opinions will help to shape the future of ED nursing.

Utilizing media can help nurses and researchers connect with the public in innovative and novel ways. This researcher used specific nursing focused group pages on FB, to begin recruitment for this study. A short (32 second) recruitment video or participant information clip (PIC) was recorded using an iPhone 4 and a wireless Lavalier microphone. A PIC is a short piece of audiovisual material that can used to advertise a study to possible research participants, and disseminate research findings or other types of information related to research. Hammond & Cooper (2010) advocate for the use of PICs as they can be economically produced, easily accessed and reviewed and are usable in a variety of multimedia and web based formats.

The PIC was of the researcher briefly  explaining who she was,  the focus of the study, who was eligible to participate and compensation for participation (see script Appendix 1). At the end of the PIC, there was a link to the survey if the viewer wanted to participate. The PIC was posted on three different FB group pages: Scrubs Magazine (scrubsmag), Emergency Nurses Association (ENA), and California Emergency Nurses Assocation (CalENA). Before posting the PIC, the researcher contacted the administrators of the FB pages for the respective organizations to obtain permission and to demonstrate IRB approval. Although anyone can post on FB pages, it is a courtesy to obtain permission and let the administrators know that the study is a valid and IRB approved and not spam.

The survey was powered by Survey Monkey. The first page included the inclusion criteria and the informed consent. Consent was verified by the participant when the "next" button was selected. Participants were offered a $5 Starbucks e-gift card for participating and the chance to win an iPad2 in a raffle if they provided an email

address that was not connected to their web survey. This assured anonymity and the provision of the email address was not required. The inclusion criteria was delineated in the video and in the printed explanation (an EDRN working at least 6 months) but this, of course, did not prevent RNs who were not ED based or had not been working at least 6 months from participating.

At least 78 of the 190 RNs who participated were obtained from these SNS in less than 72 hours. This is known to the researcher because the study had not been opened up to any other RNs via traditional venues such as flyers in staff lounges or staff emails (hospital specific IRB approvals had not been obtained yet). Multiple FB users (EDRNs) "liked" the PIC and reposted the PIC and link to their personal FB thereby enhancing recruitment of other EDRNs. This is complementary to the Pew Survey findings that 26% of all FB users "Like" another user's content which then re-posts to their FB page for others to see (Brenner, 2012).  Reposting is referred to as the "multiplier effect" and validates via lateral communication the posting is well received. Reposting by an individual is by their choice and with whom they share it is dependent on their privacy settings. Reposting in this study demonstrated a medium ("liking" and "Sharing" content) and high engagement (participating in the study).

The characteristics of the Emergency Department Registered Nurse (EDRN) respondents recruited from FB were consistent with current FB user demographics. Most responders were female (80.8%, n=63), which is consistent also with general EDRN demographics (Gacki-Smith et al., 2009). EDRN responders in this study were younger than in other Internet based WPV study (Gacki-Smith et al., 2009)  with 76.9% (n=60) of respondents being between the ages of 26 and 45 years old (Table 1). In

another recent Internet based WPV study, 80.4% of their respondents were between the ages of 35 and older than 55) (Gacki-Smith et al., 2009) Over half (66.7%), of EDRN responders were white, which does not fit with current literature that supports that FB users are becoming more ethnically diverse but accurately reflects current ethnographic profiles of EDRNs.

| Table 1. Characteristics of Emergency Department Registered Nurse (EDRN) Respondents from FB | |
| --- | --- |
| Characteristic | % (n) |
| *Sex (n=78)* | |
| Female | 80.8 (63) |
| Male | 19.2 (15) |
| *Age (n=78)* | |
| 18-25 | 3.8 (3) |
| 26-35 | 35.9 (28) |
| 36-45 | 41.0 (32) |
| 46-55 | 14.1 (11) |
| 56-65 | 3.8 (3) |
| >66 | 1.3 (1) |
| *Ethnicity (n=78)* | |
| American Indian or Alaska Native | 0 (0) |
| Asian | 11.5 (9) |
| African American | 2.6 (2) |
| Native Hawaiian or Other Pacific Islander | 2.6 (2) |
| White | 66.7 (52) |
| Hispanic | 10.3 (8) |
| Other | 6.4 (5) |
| *Highest Level of Education Completed (n=78)* | |
| Associates Degree | 20.5 (16) |
| Diploma | 5.1 (4) |
| Bachelor's Degree in Nursing (BSN) | 51.3 (40) |
| Masters Degree in Nursing (MSN) | 23.1 (18) |
| PhD | 0 (0) |
| DNP | 0 (0) |

*Discussion*

As with other recruitment strategies, recruitment using FB has limitations. Researchers are unable to control the authenticity of survey respondents or prevent multiple submissions (Ahern, 2005). One way to control for authenticity is to advertise

the study on group specific sites which may exclude random respondents. To prevent

multiple submissions from a survey, IP addresses could be collected and only one

submission allowed from each computer address.  A limitation of internet-based

research is that researchers are unable to control the testing environment such as

noise, distractions or participants discussing the research among themselves or with

others which may decrease internal validity (Ahern, 2005).

Farmer, Holt, Cook & Hearing (2012) assert that using sites such as FB may

increase recruitment bias if FB is the only recruitment strategy employed. The

representativeness of the sample acquired via SNSs cannot necessarily be determined.

Some authors argue that using the Internet for survey research may limit participants to

only those with access to computers (Daley, McDermott, McCormack Brown, &

Kittleson 2003) , but with increasing mobile technology utilization, the demographics of

Internet users, SNSs users are becoming more varied. Conducting internet research

may exclude people who do not have access to computers which is why a clear view of

the target populations is important prior to embarking on an internet based research.

Using SNSs, specifically FB as a recruitment strategy, has multiple advantages.

FB allows the researcher to provide anonymity when studying topics that may be

sensitive, reduces the barriers to reaching large groups of people, and can be used to

engage hard to reach or stigmatized participants (Ahern, 2005; Farmer,Holt, Cook &

Hearing, 2012; Cantrell & Lupinacci, 2007; Jones, Baldwin & Lewis, 2012; Ramo &

Prochaska, 2012). Internet research is convenient for participants who can enroll at their

leisure.  It can provide instant access to the researcher for discussions about the study.

Using SNS provides participants with timely feedback and also to healthcare

professionals and stakeholders as long as scientific rigor is maintained and ethics are upheld (Farmer, Holt, Cook & Hearing, 2012). Financial feasibility is also a strong advantage in employing FB as a research methodology (Ahern, 2005; Cantrell & Lupinacci, 2007; Jones, Baldwin & Lewis, 2012; Ramo & Prochaska, 2012).

Recruiting women and minorities into research was recently the focus of a 2012 meeting "Dialogues on Diversifying Clinical Trials" and there were many recommendations as to how to include more women and minorities in scientific research. One recommendation was to incorporate internet technology as recruitment and data collection tools. Advantages to internet based research was the convenience for subjects to participate at their leisure in their own homes thereby eliminating transportation costs and geographical barriers. Using known demographic variables, researchers can also determine a good fit by using local advertising in desired areas with the benefit that participants can join in the study in their own home using available internet technology (Coakley, Fadiran, Parrish, Griffith, Weiss & Carter, 2012).

**Conclusion**

Using FB to target a younger age range of EDRNs to participate in this study was successful and yielded a large number of completed responses in a short time period (less than 72 hours) at very little cost to the researcher. Recording the PIC was cost effective and posting the video and link to the site on pre-existing group web pages was free. This free advertising coupled with FB users employing the "like" and "share" features of FB provided valuable viral marketing and snowball recruiting. Future researchers should not overlook using this type of recruitment methodology if the demographics of the desired study population and subject matter permit.

Appendix 1

PIC Script

Hello my name is Rebekah Child and I am a doctoral candidate in the school of nursing at the University of California, Los Angeles. Iif you are an emergency department nurse and have been working for six months or longer I am interested in your experience with workplace violence and patient safety.

If you are willing to participate please click on the link below or email me for more information.

I am hopeful that my research will help us better understand the phenomenon of workplace violence and make the emergency department a safer place for patients and all ED staff.

Thank you for your time.

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**Chapter Three**

**Appraisal, Coping Mechanisms and Organizational Support in ED RNs Who Have Experienced WPV**

**Introduction**

The increasing prevalence and frequency of workplace violence (WPV) in the health care setting, specifically Emergency Departments (EDs), is well documented in the literature and affects nursing disproportionately over other health care providers. Registered nurses (RNs) experience the majority of WPV incidents (Peek Asa, Cubbin & Hubbell, 2007; Wassell, 2009). WPV is defined by the National Institute for Occupational Safety and Health (NIOSH, 2002) as "an act of aggression directed toward persons at work or on duty, ranging from offensive or threatening language to homicide" and by other researchers as *any* physical or emotional abuse that results in physical or emotional injury (Gacki-Smith, Juarez, Boyett, Homeyer, Robinson & Maclean, 2009). The Justice Department Bureau of Statistics substantiates the rising problem of workplace violence in all occupations and reports that more than 572,000 nonfatal violent crimes occurred to persons while at work or on duty in 2009. Recent statistics specific only to healthcare also indicate increasing levels of WPV. Gacki-Smith et al., (2009) indicated that approximately 3,460 attacks were reported by healthcare workers over the past five years, with an average of 11 incidences of physical violence per site for the surveyed five year period. Highlighting the seriousness of WPV, Phillips (2007) reports that there were 69 homicides in health care from 1996 to 2000. RNs who work in EDs and in psychiatric facilities are the most vulnerable and experience the highest number of assaults (Gates, 2006; May & Grubbs, 2002).

The ED is especially vulnerable because it is considered the "gateway" to the hospital, seeing the most traffic in terms of patients and visitors (Rintoul, Wynaden & McGowan, 2009, p.123). The ED staff is also at risk for WPV because most WPV occurs in the acute phase of a patient's illness; when a patient usually presents to the ED (Bowers, Allan, Simpson, Nijman & Warren, 2009). WPV is a significant occupational hazard for all hospital staff and is associated with recruitment and retention problems and with decreased quality of patient care (American Psychiatric Nurses Association, 2008). The United States Occupational Safety and Health Administration (OSHA) estimates that there are 2,600 nonfatal physical assaults on health care staff each year. However, this estimate of 2,600 only accounts for reports made to OSHA where the victim was significantly hurt to require days off of work and fails to account assaults where the victim did not report the event. Standardized reporting procedures make accurate estimates of WPV difficult and varied from source to source (OSHA, 1994).

WPV does not just include physical assault. Although verbal abuse is not often counted as significant in the discussion of WPV, Dalton and Eracleous (2006) assert that the damaging effects of verbal abuse and threats can be equally as damaging as physical violence. Verbal WPV (VWPV) is considered a precursor to physical WPV (PWPV) and can be better understood by borrowing from the Criminal Justice Literature, specifically the Broken Windows Theory (Kelling & Coles, 1996). This theory purports that ignoring and/or tolerating low-level unwanted behavior can be a precursor to more serious crimes or unwanted behavior (McPhaul & Lipscomb, 2004). Continued appraisal of WPV events as something to be tolerated affects the individual's coping

abilities and may impede utilization of organizational support at the time of the event.

WPV is considered by most ED RNs to be a significant stressor. How ED RNs respond

to WPV is partially determined by their past experiences with violence, cognitive

appraisal, coping mechanisms and resources available to them including organizational

support (Bonner & McLaughlin, 2007; Fernandes et al., 1999; Moran, 1994). Cognitive

appraisal dictates how a person chooses, subconsciously or consciously to deal with a

situation, or copes. Coping mechanisms are influenced by personal and environmental

factors and are developed in response to stressors, such as WPV. How ED RNs

cognitively appraise WPV, their subsequent coping mechanisms, and resources they

employ when confronted with WPV have not been well researched in the literature. The

purpose of this study was to examine the relationships among appraisal, organizational

support, coping mechanisms, and the frequency of both VWPV and PWPV in ED

nurses.

**Theoretical Framework**
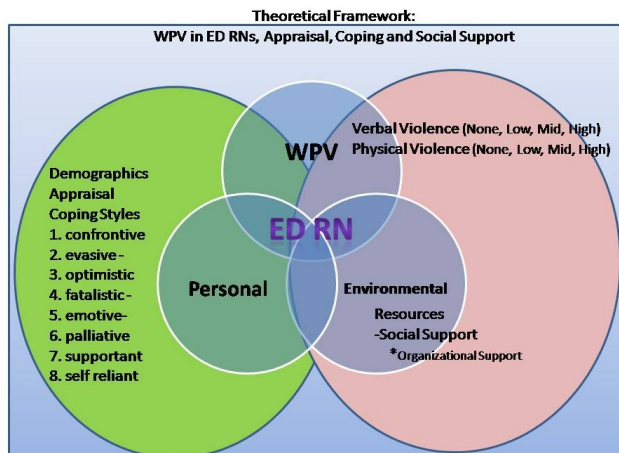


*Figure 1. Theoretical Framework*

A modified version of Lazarus and Folkman's theory of Stress, Adaptation and Coping (1984) guided this study (Figure 1) and purports that a person's coping mechanisms are determined, in part, by their cognitive appraisal of the situation. Cognitive appraisal includes primary and secondary appraisal. Primary appraisal occurs when people assess life events and determine whether these events are threatening or challenging and is further subdivided into three types: irrelevant, benign-positive and stressful. Of particular interest to this study is irrelevant exposure defined as when a person "habituates" to a stimulus. After repeated exposure to a stimulus, a person ceases to consciously respond to it. ED RNs consistently say WPV is "part of the job" implying on some level that they have been habituated to it. ED RNs report that a major reason they do not report WPV is because they do not think anything will be done about it by law enforcement or hospital management (Gacki-Smith et al., 2009).

The concept of appraisal in this study's conceptual framework is important because it might be while ED RNs may have become habituated to this stimulus and yet the negative repercussions of this stimulus still exist not only for the ED RN but also for peers, other healthcare workers and patients. Luck, Jackson & Usher (2007) surmise that "in order for a nurse to report a violent event, it has to be recognized and experienced by the nurse as an act of violence" (p. 1072). Secondary appraisal refers to a person's evaluation of various actions that can be taken in a specific situation. This appraisal is considered a crucial determinant in subsequent actions and includes whether the person uses what Lazarus and Folkman refer to as a problem focused strategy (active coping) or a maladaptive coping mechanism (1984).

According to the Theory of Stress, Appraisal and Coping, after a person has appraised the stressor they choose a way of coping with the stressor (Lazarus and Folkman, 1984). Coping is defined as the "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus and Folkman, 1984, p.141). There are two types of coping mechanisms: problem focused and emotion focused. Problem focused coping includes adaptive coping mechanisms and focuses on dealing with the problem that is causing the stress or attempting to solve or master the stressor. Adaptive coping mechanisms include dealing directly with the stressor such as seeking out information, direct action or appropriate alternatives. These adaptive coping mechanisms have been linked to lower levels of burnout in nursing (Pines & Aronson, 1981; Gillespie & Melby, 2003) but have not been explored in ED RNs.

In contrast to problem-focused coping, emotion-focused coping regulates the emotion that exists with the stress but does not involve mastering or solving the stressor being experienced. Emotion focused coping is further categorized into avoidant or emotional-approach. Avoidant coping mechanisms are considered by some researchers to be maladaptive and are synonymously referred to as such (Burgess, Irvine & Wallymahmed, 2010; Krause, Kaltman, Goodman & Dutton, 2008; Lazarus & Folkman, 1984). Maladaptive, avoidant coping mechanisms can include avoidance, denial, isolation and substance abuse (Burgess et al., 2010). When maladaptive coping mechanisms are used, stressors can become cumulative which affects an individual's capacity to recover from subsequent traumatic events and may lead to long term and detrimental health issues (Krause et al., 2008).

Although Lazarus proposed a bidimensional model for assessing coping many researchers have further explored coping and developed subcategories in an attempt to more clearly define coping mechanisms and have removed descriptors such as "maladaptive". Anne Jaloweic developed the Jaloweic Coping Scale (JCS) that ultimately contains eight different coping mechanisms and was the tool used in this study (1984). These eight styles of coping include confrontive (face up to the problem), evasive (avoid the problem), optimistic (positive thinking), fatalistic (pessimistic thinking), emotive (release emotions), palliative (make yourself feel better), supportant (use support systems) and self reliant (depend on yourself). Evasive, fatalistic and emotive coping mechanisms could be considered maladaptive and have been linked in past studies to decreased life satisfaction, more stress and more psychiatric symptoms (Hedlund, Ronne-Engstrom, Carlsson, & Ekselius, 2010; Lin, Probst & Hsu, 2010; Wang, Kong & Chair, 2010) although this link has not been investigated in ED RNs.

Coping mechanisms are not developed in a cognitive silo but are influenced by the environment including available resources. Resources include objects and other people and can be used in creative ways and are considered 'tools' that can be implemented in various coping mechanisms. Lazarus and Folkman group these resources into major categories which include health and energy, positive beliefs, problem solving skills, social skills, social support (which includes organizational support), and material resources (1984).

The major category of the available support that was a focus of this study was organizational support. Social support may provide protective effects via mediating the appraisal and coping processes (DeLongis, Folkman & Lazarus, 1988). Many

researchers have argued that the perceived availability of social support can have a moderating effect on psychological distress caused by specific stressors (De Longis et al., 1988; Burgess et al., 2010). Managerial support and family support have been linked to decreased levels of stress and increased positive coping mechanisms in Brazilian oncology nurses and EMS personnel (Essex & Scott, 2007; Rodrigues & Chavez, 2008). In contrast, lack of support by peers and administrators has been linked to increased feelings of burnout and increased abseentism; affecting the individual, peers and patients (Armstrong, 2006; Chapman, Styles, Perry & Combs, 2010; Gillepsie & Melby, 2003). A link between increased stress and higher levels of burnout and decreased quality of patient care has been discussed in the literature (Rodrigues & Chavez, 2008). Managerial and organizational support has been associated with lower incidents of verbal and physical incidents of WPV as well (Peek-Asa, Cubbin, & Hubbell, 2002).

**Design**

This study was conducted using a cross-sectional survey design. Human subjects approval was obtained from the University of California, Los Angeles. The inclusion criteria included (1) Registered Nurse (RN) currently employed in the ED, (2) worked longer than six months in the ED and (3) willing to participate in the study. Nurses who had worked less than six months in ED were excluded based on an assumption that these RNs had probably spent a greater portion of that time on orientation and familiarizing themselves with the fundamentals of the environment and may have not had time to develop personalized and unique opinions or coping skills related to WPV.

The study was implemented using the Internet based survey software Survey Monkey. Subjects were recruited via ED or nurse specific sites on the social networking site Facebook (FB) including the Emergency Nurses Association (ENA) FB page, the California ENA FB page and scrubsmag.com FB page. A short video clip advertising the study was posted with a link that directed participants to the study. Participants were also recruited via staff emails at Southern California hospitals and universities. After clicking on the link, there was an in depth explanation of the study. The participant selecting "Next" after the first page implied consent to participate. All surveys were anonymous. Participants received a $5 Starbucks e-gift card and a chance to win one iPad 2 after providing an email address which was not linked to the survey data.

A total of 190 subjects participated in the study which yielded 159 completed surveys resulting in a response rate of 83.6%. Respondents who did not complete the test all stopped at some point in the demographic section before reaching the questions about incidence and prevalence of WPV and subsequent survey scales. An independent t-test found no statistically significant difference between the demographics (age, gender, level of education, type of hospital employed, shift length and time) of those who completed the study and those who did not.

**Instruments.** Demographic data were collected and included questions regarding age, gender, ethnicity, education, number of years as an ED nurse and questions regarding the type of hospital in which the participant worked. Hospital descriptor questions included profit status, population served, how many patients the ED treats per year and whether or not the ED was a trauma center (Table 1). Levels, types and perpetrators of WPV were assessed utilizing a two part question that involved

the subject selecting the frequency (Table 1), type and perpetrator of violence in the past month (Table 2). Categories of the types and perpetrators of violence were assessed utilizing the same questions as the large, national Emergency Nurses Association WPV survey (Gacki-Smith et al., 2009).

Organizational support was measured using the Survey of Perceived Organizational Support (SPOS). This is a ten item tool developed by Eisenberger , Huntington, Hutchison & Sowa (1986) with responses ranked on a Likert scale. Prior reliability analysis resulted in a reliability coefficient (Cronbach's alpha) of 0.97 with item-total correlations ranging from 0.42 to 0.83. The SPOS has been used in more than 70 studies to date, demonstrating good reliability and validity. The reliability analysis in this study for the SPOS resulted in a reliability coefficient (Cronbach's alpha) of 0.911. After scoring (and reverse scoring where applicable) the questions, the averages were taken which resulted in higher scores indicating the subject's higher agreement that they were supported by their organization and lower scores indicating less agreement.

Appraisal was measured using a modified version of Lazarus and Folkman's Ways of Coping Scale (1984) that includes four questions measured on a Likert Scale asking the participant to rate the extent to which the person can change the perceived stressor at hand, in this study the stressor was defined as WPV. There are four statements that the participant rates including "You could do or change something about it", "You had to accept it", "You needed to know more before you could act" and "You had to hold yourself back from doing what you wanted to do". This scale was tested for face validity by experts in ED Nursing and particularly, the appraisal question "You had

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to accept it" was felt by experts to be a satisfactory proxy for measuring the subject's perception of WPV being "part of the job" (Deans, 2004; Gacki-Smith et al., 2009; McPhaul & Lipscomb, 2004; Ray, 2007).

Coping mechanisms were measured using the Jaloweic Coping Scale (JCS). The JCS is a 60 item questionnaire that is used to measure cognitive and behavioral coping mechanisms. Each question is part of one of the eight coping sub-styles resulting in a cumulative total coping score which is the individual's unique denominator in determining frequency of the eight coping mechanisms. There are four possible responses regarding each coping mechanism  "Never used", "Seldom used", "Sometimes used" and "Often used." This general coping instrument has been used for over 30 years and has been used in a variety of populations, including nurses. The JCS has also been used to assess coping mechanisms in numerous types of different stressors including work stressors. The JCS has been extensively tested for validity and reliability and has a Cronbach's alpha for total use of 0.88 and for total effectiveness 0.91. To date, this scale has not been used on ED nurses specifically but has been used on psychiatric nurses and nurses in the hospital setting (Chia-Jung Hsieh, 2004; Lin et al., 2010). The reliability analysis in this study for the JCS resulted in a reliability coefficient (Cronbach's alpha) of 0.94.

**Data Analysis**

**Data Preparation.** Data was cleaned in Microsoft Excel and imported into SPSS Version 19.0. Data preparation included means and standard deviation computations where data was normally distributed or in the case of ordinal or categorical data, counts and percentages.  All data were investigated graphically and tested by way of a Kruskal-

Wallis test to confirm data met the assumptions for parametric testing. The level of statistical significance was set at p < 0.05.

Given the survey nature of this data and after examining responses, the data was re-coded in the following ways. Workplace Violence was examined separately as PWPV and VWPV. When assessing the frequency of PWPV and VWPV, choices for these groups were "NONE" (zero events in the past month), "LOW" (1-3 events in the past month), "MID" (4-6 events in the past month) and "HIGH" (greater than 6 events in the past month). Verbal and physical WPV were then recoded into binary variables (combining NONE and LOW into one and MID and HIGH into another) due to lack of subjects in each category.

Participants had five choices on a Likert scale when answering the four appraisal questions which included "strongly agree", "agree", "neither agree nor disagree", "disagree" and "strongly disagree." Appraisal was therefore recoded into groups of "Agree" (which included strongly agree and agree"), "Neutral" (neither agree nor disagree), and "Disagree" (disagree and strongly disagree).

The perception of organizational support which was also scored by participants on a Likert scale (strongly disagree, moderately disagree, slightly disagree, neither agree nor disagree, slightly agree, moderately agree and strongly agree). After items were scored, and reverse scored where applicable, participants received a score of one to seven. A score closer to seven indicated higher levels of organizational support and a score closer to one indicated lower levels of organizational support. The scores were re-coded into three groups. These groups included "High Support" (those who scored five,

six or seven), "Neutral" (those who scored four), and "Low Support" (those who scored one, two or three).

**Statistical methods used.** Analysis of variance (ANOVA) statistics were conducted for analyses related to appraisal and coping mechanisms where appraisal was the categorical predictor variable and coping mechanisms were the continuous outcome variable. Four separate ANOVA computations were conducted for each of the four appraisal questions regarding the stressor of WPV and eight coping mechanisms.

Pearson correlations were executed when analyzing WPV (both PWPV and VWPV), coping and organizational support. WPV was re-coded into dichotomous variables to collapse the four categories because there were not enough respondents in each category. Coding WPV as 0 or 1 and running a Pearson's product moment correlation yields the same result in SPSS as bi-point serial correlations (DeCoster, 2004). Analyses of variance were also conducted with organizational support as three groups (High Support, Neutral and Low Support) as the independent, predictor variable and coping mechanisms as the continuous, outcome variable.

**Results**

Sociodemographic characteristics of the sample are as follows (see Table 1). Most respondents were female (82%), between the ages of 26-45 years (72%) and had a Bachelors degree listed as their highest level of nursing education completed (48%). Time working in the ED and shifts worked were evenly distributed among categories. Almost 90 percent of RNs worked 12 hour shifts and 86.8 percent worked 3-4 shifts per week which is considered full time by most employers. Most hospitals were non-profit/non-government trauma centers that treat more than 50,000 patients per year.

More than half of the respondents (53.7%) experienced one to three physical workplace violence(PWPV) events within the last month. Verbal workplace violence (VWPV) occurred at a much higher incidence with only 6.4% of respondents reporting no events within the past month and remaining respondents reporting at least 1-3 (31.5%), 24.4% experienced 4-6 events and the majority of respondents reporting more than six VWPV events in the last month (37.8%)(see Table 2). Over 50% of all perpetrators were reported as psychiatric patients or under the influence of alcohol or illicit drugs. The highest incidents of reported PWPV were being grabbed or pulled (33.9%) or kicked (15.9%). Verbal WPV included being called derogatory names (70.9%), yelled or shouted at (84.7%) and cursed at (73.5%) (Table 3).

Appraisal was assessed using four questions from Lazarus and Folkman's Ways of Coping Questionnaire. Univariate descriptive statistics revealed that a majority of ED RNs (62.7%) either agreed or strongly agreed that WPV was something they "had to accept" (referred to as "accept"), the proxy measurement for WPV being "part of the job." 18.7% stated they neither agreed nor disagreed, 11.4% disagreed and 7.2% strongly disagreed. Although this appraisal question was not significantly related to any coping mechanisms when conducting ANOVA tests, the finding that 62.7% of ED RNs agreed or strongly agreed that they had to accept WPV is conceptually significant and will be discussed later.

Almost half (47.6%) of ED RNs either strongly agreed or agreed to the appraisal question "You had to hold yourself back from doing what you wanted to do" (referred to as "act"), 20.5% neither agreed nor disagreed and 32% either disagreed or strongly disagreed. However, the remaining questions, "You could do or change something

about it" and "You needed to know more before you could act" were not significantly associated with any of the eight coping mechanisms. Frequencies for all appraisal questions are reported in Table 4.

When analyzing the relationships between appraisal and coping analysis of variance demonstrated a significant relationship between the appraisal question "You had to hold yourself back from doing what you wanted to do" and confrontive and fatalistic coping mechanisms $F_{(4, 161)}= 2.50$, $p=.045$ and $F_{(4, 161)} = 2.73$, $p=.031$ respectively (see Table 5). None of the eight coping mechanisms were significant with any of the other 3 appraisal questions.

Next, the relationships between coping mechanisms and organizational support were addressed. Coping mechanisms and organizational support were analyzed using analysis of variance. The effects of fatalistic, evasive, emotive and optimistic coping were significant with organizational support, $F_{(2, 162)} = 3.40$, $p=.036$, $F_{(2,162)}=3.837$, $p=.024$, $F_{(2, 162)}=4.098$, $p=.018$ and $F_{(2, 162)}=4.832$, $p=.009$, respectively (Table 6).

To test relationships between levels of WPV, coping and organizational support further, Pearson correlation coefficients (see Table 7) showed a positive correlation between PWPV and VWPV $r(113)=.201$, $p <.05$. Negative correlations existed between organizational support and PWPV and VWPV $r(139)=-.210$, $p <.05$ and $r(129)= -.197$, $p <.05$ respectively. None of the coping mechanisms were significantly related to either types of WPV.

**Discussion**

Frequency of VWPV was much higher than PWPV. The levels of PWPV, although higher than anticipated, were much lower than levels of VWPV. PWPV gets

more attention in the literature than does VWPV but results in this study suggest that more research into VWPV specifically is warranted. The cumulative effects of frequent verbal WPV should not be discounted simply because there are no physical wounds. Further research is needed to assess the psychological outcomes of VWPV including post traumatic stress disorder, anxiety, job dissatisfaction, burnout, and other related metrics specific to this population.

ED RNs who were in the high PWPV and VWPV groups reported lower levels of organizational support. This finding suggests that VWPV is just as important to ED RNs perception of organizational support as PWPV even though most hospitals do not have any mandated reporting systems for VWPV. If VWPV is not taken seriously and not subject to the same standards of PWPV reporting, then the relationships between VWPV, PWPV and serious injuries will not be adequately assessed. Also, as discussed earlier, the failure to address low level unwanted behavior is hypothesized to be a precursor to incrementally violent behavior.

The top three coping mechanisms utilized by ED RNs in this sample were confrontive, optimistic and evasive and demonstrated various relationships with the other variables of interest. Fatalistic, emotive and evasive coping had significant negative relationships with perceived organizational support which could imply that ED RNs who use these coping mechanisms do not feel as supported by their organization as ED RNs who use more positive coping mechanisms such as optimistic. Fatalistic, emotive and evasive coping mechanisms are considered the three coping mechanisms that are most associated with negative outcomes such as decreased quality of life and negative psychological sequelae in other populations (Hedlund et al., 2010; Lin et al.,

2010; Wang et al., 2009) although this relationship has not been tested in the ED RN population.

The relationships between coping and organizational support were not surprising as individual coping mechanisms do not develop in a vacuum but rather should be considered a complicated mutual product of self and environmental (including organizational support) factors. Meaning, if ED RNs are not given the support they feel necessary to deal with WPV, they may develop coping mechanisms that may or may not be conducive to personal or organizational health which may then subsequently further influence their perceptions of support. These findings demonstrate that organizational support has an impact on the ways that ED RNs cope. Further research is indicated to identify which aspects of organizational support are positive enough to assist ED RNs in coping in more adaptive ways, whether less adaptive coping mechanisms are related to negative psychological and physical health outcomes, and the relationship of organizational support to ED RNs perceptions of healthy work environments and perceptions of patient safety.

An unanticipated yet interesting finding was the strong relationship between confrontive coping mechanisms and the appraisal question "You had to hold yourself back from doing what you wanted to do." Confrontive coping mechanisms are considered adaptive and include dealing with the problem directly. This finding may imply that sometimes ED RNs do not hold themselves back from doing what "they wanted to do" when faced with WPV and may put themselves or their patients at risk. If the ED RN does not have the necessary tools to deal with WPV constructively (i.e. tools like organizational support) they may feel the only recourse is to take matters into their

own hands which may perpetuate the cycle of WPV and use of less advantageous coping mechanisms.

This significant relationship between coping mechanisms and the appraisal question merits further research as well as what exactly would the ED RN 'want' to do that they felt they could not. If ED RNs are left to their own devices in a vacuum of non-support from peers and management, both maladaptive and adaptive coping mechanisms and courses of action may develop. All of these should be considered when researching the topic of WPV, coping mechanisms, appraisal and organizational support.

The analysis of ED RNs appraisal of WPV resulted in important findings as well. If nurses have already internalized WPV as 'part of the job', evidenced by strongly agreeing to the appraisal scale question "You had to accept it", then the difficulty of this work is compounded. First, the individual must cease to see WPV as an acceptable part of the job and view WPV as a modifiable event within the ED environment. This environment that allows violent behavior and places day to day nursing staff in harm's way should not continue to exist unchallenged. When oppressive behavior is allowed to continue unaddressed, staff members may develop their own set of coping mechanisms which may include unacceptable behavior that could be detrimental to staff and other patients.

One limitation to this study is the possible recall bias of participants over a one month period. Participants may over or under report incidents of WPV. Excluding ED RNs who have not been in the ED for at least six months may have obscured accurate findings about appraisal. The timeline of acclimation to the ED environment is unknown

and perhaps excluding ED RNs who have been in the department less than six months eliminated those who would have disagreed that WPV was part of the job. Smaller sample size, although consistent with the power analysis, may have hindered more robust analyses as there were not enough respondents in the NONE and LOW categories of both PWPV and VWPV to conduct certain analyses. The majority of respondents were from larger hospitals that served bigger patient populations which may skew results as well. Lastly, only the perception of organizational support was assessed which is highly subjective. More objective questions such as actual actions of the organization and also perceptions of hospital management of support that they provide may have provided a more comprehensive view of organizational support and is certainly an implication for future research.

**Conclusion**

The current state of literature regarding the incidence and prevalence of WPV is robust. However, how ED RNs are coping with this seemingly daily phenomenon is not well researched. Coping mechanisms and skills have been linked to a myriad of physical and psychological sequelae including caregiver burnout. To explore coping skills in ED RNs and the effects of various coping skills on perceptions of organizational support, patient safety and care, and healthy work environments is important to aid in developing educational and interventional tools to help the ED RN. Further exploration of appraisal of WPV would also be of interest. If the culture supports WPV being part of the job then it will become increasingly harder to develop ways to productively and positively deal with this stressor. Of course, we should look at ways to modify the environment and behavior of the perpetrators of WPV but we should also be concerned

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with providing appropriate and effective tools to the ED RN so that he or she may deal with these events in robust ways that are supported by peers, emergency department management and the organization as a whole to provide safe and effective care to patients and to maintain a healthy work environment for everyone involved.

*Table 1. Characteristics of Emergency Department Registered Nurse (EDRN)*

| Characteristic (n=159) | % (n) |
|---|---|
| *Sex* | |
| Female | 82.4 (131) |
| Male | 17.6 (28) |
| *Age* | |
| 18-25 | 3.1(5) |
| 26-35 | 35.8 (57) |
| 36-45 | 35.8 (57) |
| 46-55 | 20.1 (32) |
| 56-65 | 4.4 (7) |
| >66 | 0.6 (1) |
| *Ethnicity* | |
| American Indian or Alaska Native | 0 (0) |
| Asian | 6.3 (10) |
| African American | 2.5 (4) |
| Native Hawaiian or Other Pacific Islander | 0.6 (1) |
| White | 79.9 (127) |
| Hispanic | 6.9 (11) |
| Other | 1.8 (3) |
| Missing | 2 (1.3) |
| *Highest Level of Education Completed* | |
| Associates Degree | 30.2 (48) |
| Diploma | 6.9 (11) |
| Bachelor's Degree in Nursing (BSN) | 48.4 (77) |
| Masters Degree in Nursing (MSN) | 14.5 (23) |
| PhD | 0 (0) |
| DNP | 0 (0) |
| *Time Worked in ED* | |
| 6 months-3 years | 27.0 (43) |
| 4-6 years | 20.8 (33) |
| 7-10 years | 18.9 (30) |
| More than 10 years | 33.3 (53) |
| *Shift Worked* | |
| Day | 37.1 (59) |
| Afternoon/Evening | 27.7 (44) |
| Night | 34.6 (55) |
| Other | 0.6 (1) |
| *Length of Shift Worked* | |
| 8 hours | 1.9 (3) |
| 10 hours | 7.5 (12) |
| 12 hours | 89.9 (143 |
| Missing | 0.6 (1) |

*Shifts Worked Per Week*

    1-2 shifts                                                  0.6 (1)

    3-4 shifts    86.8 (138)

    More than 4 shifts    12.6 (20)

*Type of Hospital*

    Federal government/military    1.3 (2)

    For profit    14.5 (23)

    Not for profit/non-government    69.2 (110)

    State/Local government    8.8 (14)

    I don't know/Missing    6.3 (10)

*Type of Emergency Department*

    General (sees adult and pediatrics)    89.9 (143)

    Adult only    3.8 (6)

    Pediatric only    5.7 (9)

    Missing    0.6 (1)

*Trauma Center Status*

    Trauma    74.2 (118)

    Non Trauma    23.3 (37)

*Number of ED Visits/Year*

    1-20,000    8.8 (14)

    20,001-50,000    19.5 (31)

    >50,000    54.1 (86)

    I don't know    17.6 (28)

*Table 2.*
*Frequency of Workplace Violence Events Experienced Within the Last Month by ED*
*RNs*

| Total Physical Violence (n=136, 23 missing) | % (n) |
| --- | --- |
| 0 | 33.8 (46) |
| 1-3 | 53.7 (73) |
| 4-6 | 8.8 (12) |
| More than 6 | 3.7 (5) |
| Total Verbal Violence (n=127, 32 missing) | |
| 0 | 6.3 (8) |
| 1-3 | 31.5 (40) |
| 4-6 | 24.4 (31) |
| More than 6 | 37.8 (48) |

*Table 3. Types and Perpetrators of Workplace Violence Events Experienced Within the Last Month*

| | % (n) |
|---|---|
| Kicked | 15.9 (30) |
| Voided on/vomited on purposefully | 4.2 (8) |
| Choked/Strangled | 0 (0) |
| Hit by a thrown object(s) | 9.0 (17) |
| Bitten | 3.2 (6) |
| Grabbed/pulled | 33.9 (64) |
| Pushed/shoved/thrown | 13.8 (26) |
| Hair pulled | 2.6 (5) |
| Scratched | 11.1 (21) |
| Hit by a person | 10.6 (20) |
| Spit on | 11.1 (21) |
| Punched | 2.1 (4) |
| Stabbed | 0 (0) |
| Called names | 70.9 (134) |
| Harassed with sexual language or innuendos | 38.6 (73) |
| Threatened with legal action | 48.7 (92) |
| Threatened with physical violence or weapons | 33.3 (63) |
| Cursed at | 73.5 (139) |
| Yelled or shouted at | 84.7 (160) |
| None of the above | 5.3 (10) |
| Other | |
|     Attempted bitten but not bitten | 0.5 (1) |
|     Coughed on intentionally | 0.5 (1) |
|     Witnessed coworkers being hit, shoved and punched | 0.5 (1) |
|     Fecal matter thrown at me | 0.5 (1) |
|     Snapped with IV tourniquet | 0.5 (1) |
|     Swung at | 0.5 (1) |
| Perpetrator of Workplace Violence in Past Month | |
|     Older Adult/Geriatric Patient | 40.2 (76) |
|     Pediatric Patient | 5.3 (10) |
|     Psychiatric Patient | 65.1 (123) |
|     Trauma Patient | 21.2 (40) |
|     Patient under the influence of alcohol | 69.3 (131) |
|     Patient under the influence of illicit/prescription drugs | 55.6 (105) |
|     Someone known to you (significant other, spouse, friend, co-worker, etc.) | 3.7 (7) |
|     Patient's visitor | 43.4 (82) |

*Table 4. Appraisal Scale*                                          % (n)
n=166

Accept
    Strongly disagree                                    7.2 (12)
    Disagree                                             11.4 (19)
    Neither agree nor disagree                           18.7 (31)
    Agree                                                49.4 (82
    Strongly Agree                                       13.3 (22)

Change
    Strongly disagree                                    15.7 (26)
    Disagree                                             27.7 (46)
    Neither agree nor disagree                           28.3 (47)
    Agree                                                24.7 (41)
    Strongly Agree                                       3.6 (6)

Knowledge
    Strongly disagree                                    7.2 (12)
    Disagree                                             25.9 (43)
    Neither agree nor disagree                           31.3 (52)
    Agree                                                33.1 (55)
    Strongly Agree                                       2.4 (4)

Act
    Strongly disagree                                    12.7 (21)
    Disagree                                             19.3 (32)
    Neither agree nor disagree                           20.5 (34)
    Agree                                                31.9 (53)
    Strongly Agree                                       15.7 (26)

*Table 5. Analysis of Variance, Appraisal Question "ACT" and Coping mechanisms*

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Evasive | Between Groups | 180.629 | 4 | 45.157 | 2.207 | .071 |
| | Within Groups | 3294.468 | 161 | 20.463 | | |
| | Total | 3475.097 | 165 | | | |
| Optimistic | Between Groups | 64.294 | 4 | 16.073 | .591 | .670 |
| | Within Groups | 4378.951 | 161 | 27.198 | | |
| | Total | 4443.245 | 165 | | | |
| Confrontive | Between Groups | 221.698 | 4 | 55.424 | 2.498 | .045 |
| | Within Groups | 3571.498 | 161 | 22.183 | | |
| | Total | 3793.195 | 165 | | | |
| Fatalistic | Between Groups | 51.649 | 4 | 12.912 | 2.728 | .031 |
| | Within Groups | 762.051 | 161 | 4.733 | | |
| | Total | 813.700 | 165 | | | |
| Emotive | Between Groups | 31.703 | 4 | 7.926 | 1.292 | .275 |
| | Within Groups | 987.511 | 161 | 6.134 | | |
| | Total | 1019.214 | 165 | | | |
| Supportant | Between Groups | 39.678 | 4 | 9.920 | 1.265 | .286 |
| | Within Groups | 1262.582 | 161 | 7.842 | | |
| | Total | 1302.260 | 165 | | | |
| Palliative | Between Groups | 12.701 | 4 | 3.175 | .416 | .797 |
| | Within Groups | 1228.828 | 161 | 7.632 | | |
| | Total | 1241.528 | 165 | | | |
| Self reliant | Between Groups | 35.529 | 4 | 8.882 | .849 | .496 |
| | Within Groups | 1684.397 | 161 | 10.462 | | |
| | Total | 1719.926 | 165 | | | |

*Table 6. Analysis of Variance, Coping and Organizational Support*

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Confrontive | Between Groups | 61.923 | 2 | 30.962 | 1.289 | .278 |
| | Within Groups | 3891.110 | 162 | 24.019 | | |
| | Total | 3953.033 | 164 | | | |
| Fatalistic | Between Groups | 33.575 | 2 | 16.788 | 3.404 | .036 |
| | Within Groups | 798.976 | 162 | 4.932 | | |
| | Total | 832.552 | 164 | | | |
| Evasive | Between Groups | 166.916 | 2 | 83.458 | 3.837 | .024 |
| | Within Groups | 3523.822 | 162 | 21.752 | | |
| | Total | 3690.738 | 164 | | | |
| Optimistic | Between Groups | 258.291 | 2 | 129.146 | 4.832 | .009 |
| | Within Groups | 4330.212 | 162 | 26.730 | | |
| | Total | 4588.503 | 164 | | | |
| Emotive | Between Groups | 49.783 | 2 | 24.891 | 4.098 | .018 |
| | Within Groups | 984.037 | 162 | 6.074 | | |
| | Total | 1033.820 | 164 | | | |
| Palliative | Between Groups | 3.580 | 2 | 1.790 | .160 | .852 |
| | Within Groups | 1806.793 | 162 | 11.153 | | |
| | Total | 1810.373 | 164 | | | |
| Supportant | Between Groups | 7.689 | 2 | 3.845 | .455 | .635 |
| | Within Groups | 1369.233 | 162 | 8.452 | | |
| | Total | 1376.922 | 164 | | | |
| Self reliant | Between Groups | 4.023 | 2 | 2.011 | .172 | .842 |
| | Within Groups | 1896.342 | 162 | 11.706 | | |
| | Total | 1900.365 | 164 | | | |

*Table 7. Correlations.*

| | | Confrontive | Evasive | Optimistic | Fatalistic | Emotive | Palliative | Supportant | Self reliant | VWPV | PWPV | Org. Support |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VWPV | Pearson correlation | -.153 | .151 | -.100 | -.004 | -.087 | .112 | .046 | .110 | 1 | | |
| | Sig. (2 tailed) | .078 | .082 | .249 | .964 | .319 | .198 | .597 | .206 | | | |
| | N | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 142 | | |
| PWPV | Pearson correlation | -.027 | -.002 | -.088 | .028 | .051 | .009 | .030 | .066 | .201* | 1 | |
| | Sig. (2 tailed) | .746 | .983 | .295 | .745 | .544 | .913 | .723 | .306 | .032 | | |
| | N | 142 | 142 | 142 | 142 | 142 | 142 | 142 | 142 | 113 | 150 | |
| Organizational Support | Pearson correlation | .118 | -.190* | .232** | -.199* | -.193* | -.019 | .011 | .017 | -.197* | -.210* | 1 |
| | Sig. (2 tailed) | .133 | .015 | .003 | .010 | .013 | .811 | .892 | .827 | .026 | .013 | |
| | N | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 129 | 139 | 165 |

**. Correlation is significant at the 0.01 level (2 tailed).

*.   Correlation is significant at the 0.05 level (2 tailed).

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**Chapter Four**

**Workplace Violence, Organizational Support and Perceived Patient Safety in**

**Emergency Department RNs**

Workplace violence (WPV) has been cited as one of the most worrisome

occupational hazards for nurses both nationally and internationally (Franz, Zeh,

Schablon, Kuhnert & Nienhaus, 2010; Gacki-Smith, Juarez, Boyett, Homeyer, Robinson

& Maclean, 2009; Ulrich, Buerhaus, Donelan, Norman & Dittus, 2005). Numerous

studies have confirmed that hospital staff members are subjected to increasingly

numerous verbal and physical WPV on a daily basis (Gallant-Roman, 2008; Gacki-

Smith et al., 2009; McPhaul & Lipscomb, 2004). Going to the hospital as an employee

or as a patient seeking care has historically been regarded as a safe haven, but with the

increasing levels of verbal and physical WPV, this safe haven is now becoming one of

the most dangerous workplaces (Clements, DeRanieri, Clark, Manno & Kuhn, 2005).

A goal of every hospital is to provide safe and effective patient care. What

happens, however, when trends of WPV compete with this goal whether indirectly via

staff or directly via violence that the patient witnesses or experiences? A work

environment where an employee is safe from foreseeable workplace hazards is

mandated by regulatory agencies such as Occupational Safety and Health

Administration (OSHA)  but these mandates do not include evaluations of subjective

perceptions of feeling safe and supported. WPV has been well documented as a

foreseeable hazard of hospitals, specifically Emergency Departments (EDs) and has

received the attention of many organizations including OSHA, The Joint Commission

(JCAHO), the American Nurses Association (ANA), the Emergency Nurses Association

(ENA), the American College of Emergency Physicians (ACEP) and National Institute for Occupational Safety and Health (NIOSH). Patient safety is always a cornerstone of all of these groups thusly influencing hospital policies, procedures and standards of care, therefore, the purpose of this study was to examine the links between the concepts of WPV, perceived organizational support and perceived patient safety.

**Literature Review**

The guiding theoretical framework for this study is Bandura's Social Cognitive Theory (SCT). Social Cognitive Theory asserts that one of the most important and not yet recognized mediator of human behavior is human cognition (1977, 1984) and how a person is influenced and influences their environment. This concept of connections and reciprocal influences between human behavior and environment is critical for this study.

Social Cognitive Theory also views the person as having the ability to regulate behavior based on the premise that a person (patient) and the environment are mutual products of each other (Arnold, Chaney, Hough, Hughes, Nieswiadomy, & Watson, 2005). Applying this theory to the study of WPV helps to examine the interconnectedness of the person (the ED RN) and the environment (the ED and WPV). Because patients are an integral and unavoidable component of the ED, they become a part of the environment. If the RN does not feel safe in the environment, then subsequently, in this author's opinion, neither can the patient. As illustrated in Figure 1, the ED RN does not exist independently within an organization but is rather influenced by WPV, perceived organizational support and perceptions of patient safety. How the relationship of these variables directly and indirectly affect each other has not been well researched and is the focus of this paper.
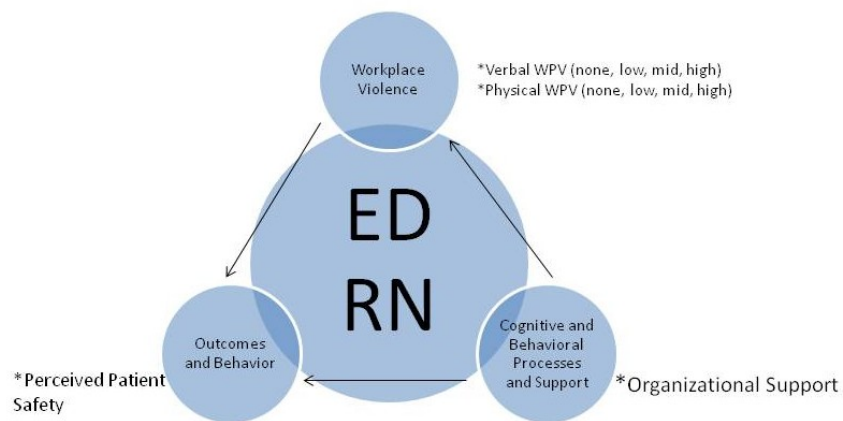
Figure 1.

**Workplace violence**. Definitions of WPV are varied and numerous, further compounding the problem of targeted research and intervention. WPV is defined by NIOSH as "an act of aggression directed toward persons at work or on duty, ranging from offensive or threatening language to homicide" (CDC, 2002, online). WPV is defined by other researchers as any physical or emotional abuse that results in physical or emotional injury (Gacki-Smith et al., 2009).

OSHA (2004) reported that the most victimized job professions in the health care sector were nurses, aides, orderlies and attendants. The Institute for Safe Medication Practices (ISMP) found that almost 90 percent of survey respondents (which included nurses, pharmacists and other health care workers) had experienced some form of workplace harassment or intimidation within their last year of employment (2004). RNs still have the highest rates of WPV out of all health care workers with those working in psychiatric units, geriatric units and emergency departments ranking the highest. The Emergency Nurses' Association's landmark 2007 study found that 86% of ED RNs experienced at least one physical WPV event in the last three years and 41%

experienced verbal WPV on a weekly basis and 27% on a daily basis (Gacki-Smith et al., 2009).

Specifically, WPV is a pervasive problem in Emergency Departments due to the stressful nature and complexity of the current health care environment, stress from patients and family members due to long waits and mismanaged expectations (Wassell, 2009). The availability of the ED 24 hours a day combined with the perceived chaos of the ED environment by family members and patients causing elevated anxiety, as well as the presence of persons with substance abuse or mental health problems all contribute to the inherent vulnerability of the ED and its staff (Gacki-Smith et al., 2009; Wassell, 2009).

The incidence and prevalence of WPV should not be considered as an isolated topic but rather should be examined as its relationship to an organization and society as a whole. The occurrence of WPV not only affects the physical and psychological well being of the ED RN but also the environment in which the ED RN works including other staff members, management, organizational support systems and of course, the patient. O'Brien-Pallas, Duffield & Alksnis (2004) reported increased delays in nursing interventions when there was individual or unit based WPV suggesting that WPV could be linked to outliers in other metrics, such as hospital acquired infections, National Patient Safety Goals (NPSGs), and other nurse sensitive indicators. The link between disruptive physician behavior, for example, and registered nurses' feelings of decreased self esteem, worthlessness and decreased job satisfaction has been discussed in the literature (Diaz & McMillin, 1991; Rosenstein & O'Daniel, 2008). The Joint Commission

(JCAHO) reiterated these findings and the link between disruptive behavior by hospital employees and physicians with increased adverse patient events (2004).

**Patient and hospital safety**. A safe hospital environment is a right for all patients (JCAHO, 2006) and staff alike (OSHA , 2006). According to the Institute of Medicine report, a basic level of safety should exist for all who use the health care system (Kohn, Corrigan & Donaldson, 2000) and a subsequent inference could be made, for those directed to implement care within the system.  Safety has been considered by some researchers to be an action that is considered on a group level, meaning that as one group member strives for safety, all group members do so as well (Spector, Coulter, Stockwell & Matz, 2007).Ensuring that all possible interventions to secure a safe environment for patients and staff are implemented by staff, managers, and the organization as a whole  is paramount to adequate health care delivery.

There is a link between organizational characteristics and characteristics of the environment (Kohn et al., 2001). People can become immune to defects in a system and learn to work around them, similarly to RNs accepting WPV as just "part of the job" (Deans, 2004; McPhaul & Lipscomb, 2004; Ray, 2007). Workarounds may be employed in the short term but the subsequent negative course of events cannot be ignored indefinitely. There is an emphasis on the ability of a system to deliver care safely (Kohn et al., 2001; JCAHO, 2008, 2010) and perhaps, one of the best ways to see if care is being delivered safely is to test the perceptions of those members charged with delivering patient care, the RN.

The National Patient Safety Foundation defined patient safety as "the avoidance, prevention and amelioration of adverse outcomes or injuries stemming from the

processes of health care" (Kohn et al., 2001, p.57). Safety has multiple dimensions including processes that should identify, evaluate and decrease hazards as best as possible. One of the processes used to evaluate safety should be assessing the staff members who are dealing with high stress environment such as WPV on a daily basis (Dilek, 2008).

**Perceived organizational support**. Social support in the form of peers, family, co-workers, and larger organizations has been discussed by numerous researchers as influencing an individual's ability to cope and deal with life stressors. Lazarus and Folkman discussed the importance of social support in their work Stress, Adaptation and Coping (1986) and referred to organizational support as one form of social support which is the variable of interest here. Eisenberger et al., (1986) developed a tool to measure perceived organizational support that is used in this study. Perceived organizational support is important to measure in employees based on the assumption that the actions of employees can be directly related to their perceptions of the actions of the employing organization. In this paper,  the 'action' of the employee is their perception of patient safety as the ED RN is considered an agent of the delivery of health care.

Dealing with WPV has been considered by some to be a distraction not only in the short term but also in the long term when staff may be experiencing PTSD, anxiety, burnout and compassion fatigue. Distractions have been linked to increased medication errors, poor communication handoffs, near misses and adverse events (Ridley, Wilson, Harwood & Laschinger, 2009; Roche, Diers, Duffield, & Catling-Paull, 2010; Gates, 2006; Hampton, 2007; Lewis, Dickinson, & Contino, 2007; Phillips, 2007; Luck, Jackson

& Usher, 2007; Quanbeck , 2006). To date, the link between WPV and decreased patient safety with regard to RNs' psychological well being and perceived organizational support has not been well researched. This study will help to bridge this knowledge gap in the literature. Therefore, the specific aims of this paper are:

1. Analyze relationships between nurses'  perceptions of organizational support and their perceptions of patient safety.
2. Analyze relationships between WPV, nurses' perceptions of organizational support and their perceptions of patient safety.

**Methods**

This study was conducted using a cross-sectional survey design. IRB approval was obtained from the University of California, Los Angeles. The inclusion criteria included (1) RN currently employed in the ED, (2) have worked longer than six months in the ED and (3) willing to participate in the study.  Nurses who have worked less than six months in ED were excluded based on an assumption that they had not had sufficient exposure to WPV as working independent RNs off of department orientation.

**Instruments.** Demographic data was collected and included questions regarding age, gender, ethnicity, education, number of years as an ED nurse and questions regarding the type of hospital in which the participant worked.  Hospital descriptor questions included profit status, population served, how many patients the ED sees per year and whether or not the ED is a trauma center (Table 1). Both high patient census volume and trauma center status have been linked to increased levels of WPV (Gacki-Smith et al., 2009). The same questions were used to identify types, frequency and perpetrators of WPV as the 2009 national WPV study conducted by the Emergency

Nurses Association however, this study asked the respondents to reflect over a one month period (Gacki-Smith, 2009).

Organizational support was measured using the Survey of Perceived Organizational Support (SPOS). This is a ten item tool developed by Eisenberger et al., (1986) with responses ranked on a one to seven Likert scale. A score closer to seven indicated that the subject perceived higher levels of organizational support. Prior reliability analysis resulted in a reliability coefficient (Cronbach's alpha) of 0.97 with item-total correlations ranging from 0.42 to 0.83. The SPOS has been used in numerous studies (more than 70 studies to date) and has demonstrated good reliability and validity. The SPOS has been used with ED nurses in studying conflict management styles (Johansen, 2010) but not in relation to WPV in ED RNs specifically. The reliability analysis in this study for the SPOS resulted in a reliability coefficient (Cronbach's alpha) of 0.911.

Perceived patient safety was measured using the Safety Attitudes Questionnaire (SAQ) which is a 36 item tool adapted from Sexton and colleagues' Flight Management Attitudes Questionnaire developed for the aviation industry (Sexton et al., 2006). The adapted version of this survey has been used to assess safety related attitudes and influence patient safety measures (Modak, Sexton, Lux, Helmreich & Thomas, 2007). The SAQ includes items about teamwork climate, safety climate, job satisfaction, stress recognition, perceptions of management and working conditions. This tool is scored on a five point Likert scale. After scoring the tool, higher scores (closer to 100) indicated that the subject perceived higher levels of safety and lower scores (closer to zero)

indicated perceptions of lower levels of safety. The reliability analysis in this study for the SAQ resulted in a reliability coefficient (Cronbach's alpha) of 0.912.

Participants were recruited utilizing a recruitment video (participant information clip or PIC) posted on emergency nurse related Facebook pages and also via staff emails at multiple Southern California Emergency Departments. A total of 190 subjects participated in the study which yielded 159 completed surveys resulting in a response rate of 83.6%. An independent t-test found no statistically significant difference between the demographics or termination points of those who completed the study and those who did not. The online survey site Survey Monkey was used to conduct the study. Due to the functionality of the software and the desire to keep responses anonymous, participants were not able to come back and start where they left off as this would have required an identifier such as an email address or unique code which may have contributed to the reasons why some subjects terminated the study early.

**Data Analysis**

Data was cleaned in Microsoft Excel and imported into SPSS Version 19.0. Where data were normally distributed, means and standard deviations were computed, or in the case of ordinal or categorical data, counts and percentages. All data were investigated graphically and tested by way of a Kruskal-Wallis test to confirm data met the assumptions for parametric testing. Differences in group means where data were normally distributed were tested by way of a t-test. Where data were ordinal and not normally distributed, non-parametric statistical tests were used in the analysis. Spearman rank statistics were computed to investigate correlations and the Wilcoxon

rank sum tests were used to test for differences between groups where data were ordinal. The level of statistical significance was set at p < 0.05.

Levels of WPV were coded as "NONE", "LOW", "MID", and "HIGH". Perceived organizational support was re-coded into "LOW", "NEUTRAL" and "HIGH" groups. Perceived patient safety scores, once scored and reverse scored where applicable, resulted in a score of either 0, 25, 50, 75 or 100 with scores closer to 100 indicating higher levels of perceived patient safety and scores closer to zero indicating lower perceptions of patient safety.

**Results**

The majorities of respondents were female between the ages of 26-45 (72%) and had a Bachelors degree in nursing (Table 1). Subjects reported one to three (53.7%) physical workplace violence (PWPV) events within the last month most frequently followed by zero (33.8%) as the next most frequent. Verbal workplace violence (VWPV) occurred at a much higher incidence with only 6% of respondents reporting zero events within the past month and remaining respondents reporting at least 1-3 (31.5%) and most respondents reporting more than six VWPV events in the last month (37.8%) (Table 2).

The analysis of the relationship between perceived organizational support and perceived patient safety demonstrated a significant correlation between perceived patient safety (as measured by the SAQ) and perceived organizational support (as measured by the SPOS) (rs[158] = 0.59, p <.0001).

There was a relationship between VWPV and patient safety, however, there was no significant relationship between PWPV and patient safety. There was an inverse

relationship between high levels of PWPV and lower levels of perceived organizational support (rs [134] = -0.27, p <0.001). The Spearman's rho correlation coefficient for PWPV and perceived patient safety was not significant  (rs[134] = -.16, p <.06). The Spearman's rho revealed a significant relationship between VWPV and perceived patient safety (rs[126] = -0.29, p < .001) (Figure 2).

**Discussion**

There were no significant relationships between ED RN demographics and the other variables. This may reflect the general homogeneity of the sample or it may reflect that demographics such as education, length of time spent working in the ED and time of shift are not important variables of interest in the relationships of perceived organizational support and perceived patient safety. A larger sample with more diversity to retest these relationships may provide different results.

The significant relationship between perceived organizational support and perceived patient safety is important and supports the theoretical framework. ED RNs who scored higher on the SPOS also scored higher on the SAQ implying that those ED RNs who perceived they had more organizational support also perceived they were a part of the delivery of safer patient care. This is a significant finding in a time where patient safety, patient satisfaction and patient quality indicators are so paramount for reimbursement and for meeting organizational goals and regulatory agency requirements. Organizations should seek to provide every level possible of support to the ED RN in efforts to maintain the highest standards of safety as the employee's perception of the organization and all of its agents could affect the ED RNs likelihood to strive toward organizational goals. Conversely, ED RNs who scored lower on the SPOS

also scored lower on the SAQ implying that the less support they received, the less safe they felt patient care was.

The relationship between perceived organizational support and perceived patient safety was significant but how did WPV affect these findings? There was a significant relationship between verbal violence and safety scores but, interestingly enough, there was no significant relationship between physical violence and safety scores although there was a relationship between PWPV and organizational support. Levels of VWPV were higher than PWPV which may have influenced these findings in that the ED RN experienced PWPV less in this time period. This may also imply that when an ED RN experiences physical WPV more resources are available to him or her at the time including supervisor accident reports, support from law enforcement, peers and management and even time off. When this support is not received, as may be the case if repeated PWPV events are experienced, then the ED RN might believe that they have less organizational support. Less is known in the WPV literature about the implementation of organizational interventions for VWPV. Zero tolerance policies are suggested by numerous researchers (Clements et al., 2005; Gallant-Roman, 2008; McPhaul & Lipscomb, 2004)  but exactly how they are implemented by management and how these policies are perceived or received by staff  in relationship to VWPV is not well documented.

The relationship between VWPV and perceived patient safety is paramount to this study. The Joint Commission in 2008 clearly discussed in their sentinel event 40 that disruptive behavior from staff, peers physicians, administrators and other health care employees contributed negatively to patient safety events and that these types of

behaviors should not be tolerated (JCAHO, 2008). In 2010, JCAHO Sentinel Event no. 45 referred to hospitals preventing serious events such as assault, rape and homicide of patients and staff. Most would agree that assault, rape and homicide are at the top of unwanted behaviors but little was mentioned about behaviors leading up to these life threatening events. According to the Broken Windows Theory (Kelling & Coles, 1996) in the criminal justice literature, accepting low level unwanted behaviors is essentially giving passive permission for future, more serious behaviors. By permitting or not addressing verbal WPV, hospital administrations may inadvertently allow escalation to more serious physical types of violence. For example, if a patient or visitor to the ED uses VWPV in the beginning of their visit they may continue to escalate to PWPV if no boundaries or limitations are given regarding unwanted behavior. This type of behavior may also contribute to the overall environment where all types of WPV are accepted as staff members become inured to the abuse, further compounding the problematic perceptions that WPV is simply part of the job.

A focus on professionalism and a culture of safety between health care workers and its link to patient safety, decreased medical errors, and adverse events has been well researched (IOM, 2004; Porto & Lauve, 2006; Roche et al., 2009; Rosenstein & O'Daniel, 2008; Spector et al., 2007; JCAHO, 2008, 2010). However, the link between disruptive patient behavior, including verbal and physical WPV, and its effect on the health care team and subsequent subjective or objective patient safety metrics has not been fully explored. This study begins to bridge the gap in the literature demonstrating the beginning of a significant relationship between VWPV and the perception of patient safety. There is an emphasis for organizations, specifically hospitals, to create

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environments where if a staff member feels intimidated, threatened or harassed, they may voice their concerns without fear of retaliation, knowing that their concerns will be addressed.

**Limitations**

Recall bias is one limitation to this study as participants may over or under report incidents of WPV over a one month period. Excluding ED RNs who have not been in the ED for at least six months may have obscured accurate findings about perceived organizational support and perceived patient safety. The timeline of acclimation to the ED environment is unknown and perhaps excluding ED RNs who have been in the department less than six months eliminated those who would have demonstrated different responses to some of these metrics. Smaller sample size, although consistent with the power analysis, may have hindered more robust analyses. The homogeneity of respondents may have skewed results as well. Lastly, only the perception of organizational support and patient safety was assessed which is highly subjective. More objective questions such as actual actions of the organization (i.e. presence of a Zero Tolerance Policy, mandatory violent prevention training, types and examples of reporting mechanisms) may have provided a more comprehensive view of organizational support. Metrics including Nurse Sensitive Indicators, such as patient falls, fall outs from standardized NPSGs and reports of medication errors in relation to reports of WPV may also be an implication for future, more comprehensive research. Comparing the subjective and objective data of subjects and their employing hospitals would certainly provide an inclusive analysis of these concepts.

**Conclusion**

This study begins to make the important link between the perception of organizational support, perceptions of patient safety and WPV. An emphasis on patient safety is paramount in all of these discussions. If the perpetrator of WPV is the patient or patient's visitor it certainly muddies the waters of possible interventions as nurses may feel conflicted regarding reprimanding or setting strict boundaries with those for whom they are mandated to care. The ED RN may feel much more secure in reporting, for example, an abusive co-worker or physician. However, the psychological and physical outcomes of harassing and assaultive behavior are still present regardless of the perpetrator and must be addressed. Therefore, it would be a reasonable suggestion that the same policies and procedures and standards that are in place to prevent intra-hospital violence also exist to prevent and ameliorate the same unwanted behaviors from patients, their family members and other patient visitors.

The impetus for disruptive behavior is similar for patients and health care workers. Disruptive behavior between team members of the hospital staff has been attributed to high stress situations and the complexity of the health care environment (Porto & Lauve, 2006; Wassell, 2009). Although there are also differences in the purposes for which people utilize the health care system (patients seeking medical care and staff members reporting to duty), the similarities cannot be ignored in attempts to use the differences as excuses for permitting workplace violence. This researcher argues that an injury is an injury no matter who causes it and the psychological outcomes of WPV exist independent of the perpetrator. Suggested interventions to ameliorate WPV include implementing a zero tolerance policy, mandatory workshops for

staff on how to deescalate patients and visitors, retaliation free reporting, reporting that is encouraged and maybe even mandated at the hospital, state and federal level. Making WPV reporting mandatory removes the burden of judgment from the victim. The victim would not have to decide whether the incident was severe enough to report but rather reporting would be part of the policy and procedure of the organization. Mandatory reporting would also ensure that the organization had a clear picture of WPV events and could analyze the data to implement new protections or ascertain what was working well or not.

Focusing on only the "serious" crimes, such as physical WPV, only takes the plight of the ED RN on a more circumventive route, continuing to ignore other causative or contributing factors such as verbal WPV. This study demonstrates that the links between WPV, perceptions of organizational support and perceptions of patient safety exist and should be considered in future research. Interventions and policies and procedures to ameliorate or extinguish WPV of any kind should be consistently implemented. Ensuring a safe environment is imperative to providing a place where ED RNs can provide the highest level of patient care where staff and patients are safe.

*Table 1. Characteristics of Emergency Department Registered Nurse (EDRN)*

| Characteristic (n=159) | % (n) |
|---|---|
| *Sex* | |
| Female | 82.4 (131) |
| Male | 17.6 (28) |
| *Age* | |
| 18-25 | 3.1(5) |
| 26-35 | 35.8 (57) |
| 36-45 | 35.8 (57) |
| 46-55 | 20.1 (32) |
| 56-65 | 4.4 (7) |
| >66 | 0.6 (1) |
| *Ethnicity* | |
| American Indian or Alaska Native | 0 (0) |
| Asian | 6.3 (10) |
| African American | 2.5 (4) |
| Native Hawaiian or Other Pacific Islander | 0.6 (1) |
| White | 79.9 (127) |
| Hispanic | 6.9 (11) |
| Other | 1.8 (3) |
| Missing | 2 (1.3) |
| *Highest Level of Education Completed* | |
| Associates Degree | 30.2 (48) |
| Diploma | 6.9 (11) |
| Bachelor's Degree in Nursing (BSN) | 48.4 (77) |
| Masters Degree in Nursing (MSN) | 14.5 (23) |
| PhD | 0 (0) |
| DNP | 0 (0) |
| *Time Worked in ED* | |
| 6 months-3 years | 27.0 (43) |
| 4-6 years | 20.8 (33) |
| 7-10 years | 18.9 (30) |
| More than 10 years | 33.3 (53) |
| *Shift Worked* | 37.1 (59) |
| Day | 27.7 (44) |
| Afternoon/Evening | 34.6 (55) |
| Night | 0.6 (1) |
| Other | |
| *Length of Shift Worked* | |
| 8 hours | 1.9 (3) |
| 10 hours | 7.5 (12) |
| 12 hours | 89.9 (143 |
| Missing | 0.6 (1) |

*Shifts Worked Per Week*

| | |
|---|---|
| 1-2 shifts | 0.6 (1) |
| 3-4 shifts | 86.8 (138) |
| More than 4 shifts | 12.6 (20) |

*Type of Hospital*

| | |
|---|---|
| Federal government/military | 1.3 (2) |
| For profit | 14.5 (23) |
| Not for profit/non-government | 69.2 (110) |
| State/Local government | 8.8 (14) |
| I don't know/Missing | 6.3 (10) |

*Type of Emergency Department*

| | |
|---|---|
| General (sees adult and pediatrics) | 89.9 (143) |
| Adult only | 3.8 (6) |
| Pediatric only | 5.7 (9) |
| Missing | 0.6 (1) |

*Trauma Center Status*

| | |
|---|---|
| Trauma | 74.2 (118) |
| Non Trauma | 23.3 (37) |

*Number of ED Visits/Year*

| | |
|---|---|
| 1-20,000 | 8.8 (14) |
| 20,001-50,000 | 19.5 (31) |
| >50,000 | 54.1 (86) |
| I don't know | 17.6 (28) |

*Table 2.*

*Frequency of Workplace Violence Events Experienced Within the Last Month by ED RNs*

| Total Physical Violence (n=136, 23 missing) | % (n) |
|---|---|
| 0 | 33.8 (46) |
| 1-3 | 53.7 (73) |
| 4-6 | 8.8 (12) |
| More than 6 | 3.7 (5) |
| Total Verbal Violence (n=127, 32 missing) | |
| 0 | 6.3 (8) |
| 1-3 | 31.5 (40) |
| 4-6 | 24.4 (31) |
| More than 6 | 37.8 (48) |

*Figure 2. Relationships between WPV and Perceived Patient Safety*
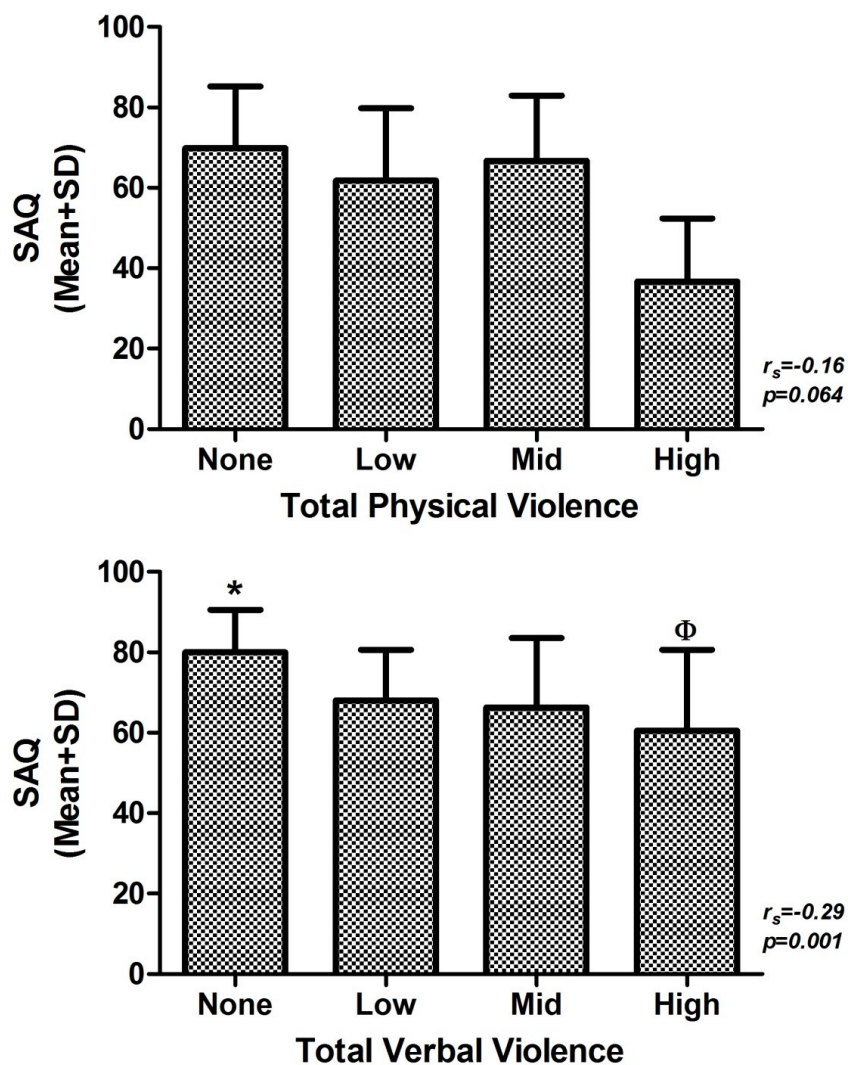


**Group means are significantly different from (∗) all other groups or (Φ) groups "None" or "Low"; p<0.05.**

*--Higher scores on Safety Attitudes Questionnaire scale indicate higher levels of perceived patient safety.*

*Figure 3. Relationships between Perceived Organizational Support and WPV*
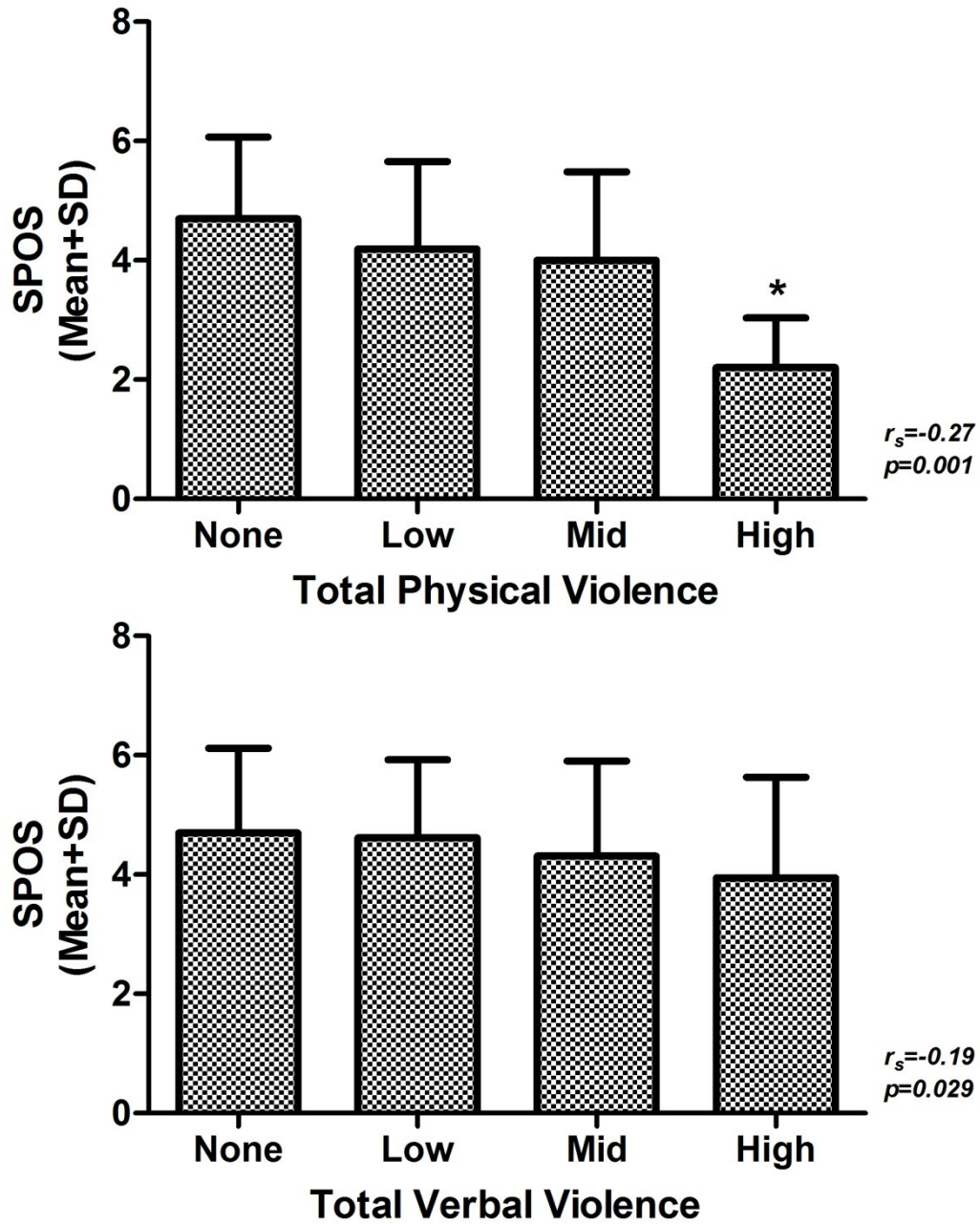
Group means are significantly different from (∗) all other groups; p<0.05.

*Higher scores on Survey Perceived Organizational Support indicate higher levels of agreement with perceived organizational support.*

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## Chapter Five

## Dissertation Summary

**Introduction**

Workplace violence (WPV) is considered currently one of the most worrisome occupational hazards that exist for Emergency Department Registered Nurses (ED RNs) (Ulrich, Buerhaus, Donelan, Norman & Dittus, 2005; Franz, Zeh, Schablon, Kuhnert & Nienhaus, 2010; Gacki-Smith, Juarez, Boyett, Homeyer, Robinson & Maclean, 2009). Although may important health care metrics are improving such as National Patient Safety Goals (NPSG), Nurse Sensitive Indicators (NSIs), hospital acquired infections and increased staffing ratios, WPV continues to pose a threat to the health care work force, specifically the ED RN. WPV is a pervasive problem due to the stressful nature and complexity of the current health care environment, including the Emergency Department (ED), stress from patients and family members due to long waits and mismanaged expectations (Wassell, 2009). Registered nurses (RNs), and even more specifically psychiatric and ED RNs, experience the majority of the incidences of WPV (Chapman, Styles, Perry & Combs, 2010; Peek Asa, Cubbin & Hubbell, 2007; Wassell, 2009).

There are multiple working definitions for WPV which further compound the problem of elucidating solutions and implementing research and adequate interventions. WPV is defined by the National Institute for Occupational Safety and Health (NIOSH) as "an act of aggression directed toward persons at work or on duty, ranging from offensive or threatening language to homicide" (CDC, 2002, online). WPV is defined by other

researchers as any physical or emotional abuse that results in physical or emotional injury (Gacki-Smith et al., 2009).

Numerous factors contribute to the phenomenon of WPV and many researchers have attempted to parse out which factors make the most significant contribution. The belief by ED RNs that  WPV is just "part of the job" and the continued absence of enforcement of rules or laws both by hospital administrators and law enforcement compound the problem.  WPV research demonstrates that it is inadequately documented, under-reported and poorly managed when reports are made. While research has been done on WPV in the inpatient hospital setting, the majority of findings support that the highest levels of WPV occur in psychiatric and emergency department settings (Chapman et al., 2010).

Researchers have not yet to date found consistent factors regarding violent situations in the Emergency Department (ED) that would lead to definitive reporting of the event to peers, supervisors or law enforcement. There is also a gap in the literature about what factors contribute to WPV and how health care providers cope with the stress that is concurrent with WPV. Even more unknown is how WPV, appraisal, coping skills and organizational social support may affect patient safety and intent to leave.

**Chapter Highlights**

**Chapter 1.**  Chapter 1 provided an introduction and brief literature review of the phenomenon of WPV in ED RNs. The theoretical framework and key concepts of the study were also introduced and discussed. Key concepts discussed were WPV, appraisal, coping, social (organizational support), patient safety and intent to leave. Finally, the specific aims and objectives of this dissertation were introduced.

**Chapter 2.**  Chapter 2 titled "Utilizing Facebook and Participant Information Clips to Recruit Participants for Research in Emergency Department Registered Nurses" discussed the methodology utilized in this dissertation, specifically the innovative use of video advertisement via participant information clips (PICs) and social media sites such as Facebook and the Internet. This chapter provided an in-depth literature review about the advantages and disadvantages to recruiting subjects via these avenues. It also compared the demographics of respondents recruited for this study versus other more traditional studies that have also researched elements of WPV.

**Chapter 3.**  Chapter 3 titled "Appraisal, Coping Styles and Organizational Support in ED RNs who have Experienced Workplace Violence" examined the relationships between appraisal, types of coping and organizational support in ED RNs who had experienced none, low, mid or high levels of WPV. Demographics were collected including information regarding ED RN age, gender, ethnicity and education. Information regarding career demographics were also collected including length of shift worked, length of time as an ED RN, and number of shifts per week. Finally, information about hospital demographics were also collected including type of hospital, patient census, and trauma center status. Frequency, type and perpetrators of WPV incidents within the last month, including verbal and physical were also collected.

Appraisal was measured using a modified version of Lazarus and Folkman's Ways of Coping Questionnaire (1984) with the specific question "You had to accept it" being a proxy measurement for ED RNs perception that WPV was an inevitable "part of the job".

Coping was measured using Anne Jaloweic's coping survey titled the Jaloweic Coping Scale (JCS) where ED RNs scored types of coping used which then resulted in a percentage of most frequently used coping styles (Jaloweic, Murphy & Powers, 1984). There were eight coping styles total including confrontive (face up to the problem), evasive (avoid the problem), optimistic (positive thinking), fatalistic (pessimistic thinking), emotive (release emotions), palliative (make yourself feel better), supportant (use support systems) and self reliant (depend on yourself). Evasive, fatalistic and emotive coping styles have been considered maladaptive and linked to decreased life satisfaction, more stress and more psychiatric symptoms in patients (Hedlund, Ronne-Engstrom, Carlsson, & Ekselius, 2010; Lin, Probst & Hsu, 2010; Wang, Kong & Chair, 2010).

Organizational support was measured using the Survey of Perceived Organizational Support (SPOS) developed by Eisenberger, Huntington, Hutchison & Sowa (1986). Higher scores demonstrated the participant's perception of greater organizational support.

Basic univariate descriptive statistics were conducted and revealed that descriptive demographics of study participants were quite homogenous in nature. The majority of respondents being Caucasian women with a Bachelor's degree in nursing who worked an average of three to four shifts per week (full time status). Most hospitals were trauma centers that cared for over 50,000 patients per year. The frequency of PWPV was lower than anticipated and the frequency of VWPV was higher than anticipated. Pearson correlation coefficients were used to determine relationships between appraisal, coping styles, organizational support and WPV. Finally, a series of

multivariate tests were conducted by using analysis of variance (ANOVA) to explore the association between sociodemographic characteristics of the sample, levels of WPV experienced, appraisal, coping styles employed, and social support.

A majority of ED RNs (62.7%) either agreed or strongly agreed that WPV was something they "had to accept", the proxy measure for WPV being "part of the job". 18.7% stated they neither agreed nor disagreed, 11.4% disagreed and 7.2% strongly disagreed with WPV as an occurrence that had to be accepted although the appraisal question was not significant with any of the other variables of interest. The three most employed coping styles by ED RNs were confrontive, evasive and optimistic. When examining the relationship between coping styles and organizational support  the effect of evasive, optimistic and fatalistic coping was significant with organizational support, $F$ (2, 140)=4.60, 3.92 and 3.73 respectively, p=.000,.012, .022. Emotive coping was moderately significant with organizational support, $F$ (2, 140), p=.066.

ANOVA tests demonstrated a significant relationship between evasive and optimistic coping styles and verbal WPV but there was no significance between physical WPV and coping styles. The effects of evasive and optimistic coping and VWPV were significant, $F$ (3,130)=7.95 and 2.74 respectively. There were no significance differences between coping styles and physical WPV. To test relationships further (minus appraisal), Pearson correlation coefficients demonstrated a highly positive correlation between PWPV and VWPV r(104)=.195, p <.05 and social support with optimistic coping styles r(143)=.199, p<.05. Significantly negative correlations existed between social support and PWPV, evasive and fatalistic coping styles, r(125)=-.203, p <.05; r(143)= -.234, p < .01; r(143)=-.269, p <.01respectively.

Higher levels of PWPV were negatively correlated and statistically significant with perceptions of organizational social support although higher levels of VWPV were not. However, VWPV and PWPV were highly correlated with each other. Certain coping styles were also statistically significant with organizational support. As the perception of organizational social support scores increased, demonstrating a positive feeling of organizational social support, the use of more problem solving oriented coping styles such as confrontive and optimistic coping styles increased. Fatalistic and evasive coping proved to have a significantly negative relationship with perceived organizational social support which could imply that ED RNs who use these coping styles do not feel as supported by their organization as ED RNs who use more positive coping styles such as confrontive.

This chapter helped to bridge an important gap WPV literature and supports that there should be continued focus on education and prevention of WPV as evidenced that the majority of ED RNs still feel that WPV is something they had to accept. Also, there is a link between coping styles and the perceptions of organizational support. ED RNs who felt higher levels of organizational support were more likely to use more problem focused coping styles which are generally considered positive by the coping literature. An emphasis on providing ED RNs with the tools to deal with and prevent WPV both on a personal and organizational level should continue to be developed to aid in dealing with the problem of WPV.

**Chapter 4.** Chapter 4 titled "Workplace Violence, Organizational Support and Patient Safety in Emergency Department RNs" added the dimension of perceived patient safety to WPV and organizational support. The premise to this aspect of this

dissertation is the concept of the interrelatedness of the environment (which may or may not include certain levels of WPV), the ED RN and the patient. It was hypothesized that if the ED RN does not feel safe due to WPV then subsequently patient care will also be affected.

Demographics, WPV and organizational support were measured as discussed in the summary of Chapter 3. Patient safety was measured using the Safety Attitudes Questionnaire (SAQ) adapted from Sexton and colleagues' Flight Management Attitudes Questionnaire developed for the aviation industry (Sexton et al., 2006). The adapted version of this survey has been used to assess safety related attitudes and influence patient safety measures (Modak, Sexton, Lux, Helmreich & Thomas, 2007). The computation of this survey resulted in a score of 0-100 with higher numbers being associated with the perception that patient safety is better.

Demographic, WPV and organizational support (SPOS) data remained the same as discussed in Chapter 3. Spearman rho correlations were used to compare the prior data with SAQ results. The analysis of the relationship between organizational support and patient safety demonstrated a significant correlation SAQ and SPOS ($r_s[158] = 0.59$, $p < .0001$). Higher scores of patient safety were correlated with higher organizational support scores. Patient safety scores demonstrated a significant relationship with VWPV although not PWPV. Where higher level of VWPV scores were reported, lower levels of patient safety were also reported ($r_s[126] = -0.29$, $p < .001$).

There was a significant inverse relationship between high levels of PWPV and lower levels of perceived organizational support which was the same finding as

discussed in Chapter 3 (rs [134] = -0.27, p <0.001). The Spearman's rho correlation coefficient for PWPV and patient safety was not significant  (rs[134] = -.16, p <.06).

This chapter added an important finding to the WPV and patient safety literature. Where ED RNs experienced higher levels of VWPV, they also reported lower levels of patient safety. This finding cannot be ignored. If general patient safety is compromised due to the actions of WPV by a particular segment of the ED population, it must be addressed by lower and upper levels of management. Again, higher levels of PWPV were related to lower levels of organizational support which may indicate a failure on management's side to actively support staff which has unknown consequences.

**Intent to Leave**

ED RNs were asked about their intent to leave the ED and whether WPV influenced this decision. Although these results were not discussed in any of the chapters above, there were some significant findings. Intent to Leave was measured with a two part question which had been used successfully with other studies and tools including  The Practice Environment Scale –Nursing Work Index (PES-NWI) (Alexander, Lichtenstein, Oh & Ullman, 1996; Gardner, Thomas-Hawkins, Fogg & Latham, 2007; Ito, Eisen, Sederer, Yamada & Tachimori, 2001). Only 13.7% of ED RNs said that they intended to leave their current job in the next year, 19.8% said maybe and the majority, 53.8% said no. However, of the "yes" and "maybe" responses 49.2% reported that their intentions to leave were related to levels of WPV experienced (p <0.001). This supports previous literature that WPV is related to nurses' intention to leave and intent to leave is negatively related to patient safety (Ditmer, 2010; Jackson, Clare & Mannix, 2002; May & Grubbs, 2002; Matthews, Harris, & Cumming, 2009)

**Directions for Future Research**

This study was a cross sectional design with limited ability to infer causality, however, findings from Chapters 3 and 4 demonstrate evidence to support that appraisal, coping styles, organizational support and patient safety all have various types of interrelationships with WPV that merit further research. The sample for this study was fairly homogenous and therefore did not reveal any significant relationships between sociodemographics of the participant or type of hospital and therefore may not be representative of WPV in EDs or ED RNs as an entirety. This is a methodological consideration that should be considered for future research.

Future research should continue to examine the psychological effects of WPV on the ED RN, specifically levels of anxiety, post traumatic stress disorder and perceptions of health work environments. WPV has been hypothesized to contribute to negative psychological sequelae as has been the case in other victimized groups but has not been investigated in this population.

Comparisons between perceptions of organizational support from staff and management would also aid in bridging the knowledge gap. There may be a disconnect between what hospital management feels they are doing for ED RNs and ED RNs knowledge or awareness of such. Reporting procedures would also be interesting to assess as perhaps hospital management does not know about the levels of WPV occurring in their EDs because ED staff members are not reporting it. The implementation and efficacy of WPV intervention and prevention programs should be addressed as well to ascertain whether effective tools are being offered to ED RNs.

Lastly, and most importantly, the link between patient safety and WPV must continue to be investigated. Objective and subjective measures of patient safety should be compared to levels of WPV. Only then would an accurate picture be revealed regarding the implications of WPV on patient safety.

**Conclusions**

WPV in the ED will most likely never be eliminated completely due to the nature of the ED and the human condition. However, the results of this dissertation research demonstrate that WPV must be addressed on many levels as it does not exist independent of other important variables. As levels of WPV increase, ED RNs will continue to be forced to find ways to work around threats to their own psychological health and patient safety; the eventual positive or negative outcomes of this are unknown.

There is still a significant amount of work to be done to raise awareness and educate ED staff and hospitals about the far reaching effects of WPV. Changing the perception that WPV is simply "part of the job" is a strong start. If WPV were truly just part of the job then there should be significant yearly education and awareness surrounding this topic (similar to utilizing the '5 rights' for medication administration or steps to preventing pressure ulcers). Absence of awareness or education surrounding WPV suggest that not only is WPV *not* part of the job but every effort should be made by ED staff and management to address this issue and ameliorate it.

Increased attention should be given to supporting the ED RN at every level in preventing WPV and providing appropriate tools to deal with WPV when it does occur. This is in the best interest of the ED RN, the hospital and the patient. As all RNs are

part of a caring profession, it is only fair and ethical that they are also cared for when

their safety is at risk in any way. Continuing to research WPV and the relationships

which exist on a personal and organizational level is one way to demonstrate a

commitment to the ED RN and the ED patient.

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Appendix 1

## CONSENT FORM

You are invited to be in an ***internet based research study*** to help us understand how workplace violence (WPV) affects the individual RN and their perceptions about environment in which they work.  The Principle Investigator of the study is Rebekah Howerton Child, RN and she is a doctoral student in the School of Nursing at the University of California, Los Angeles.  You are being asked to participate in this study because you are a Registered Nurse working in an Emergency Department.

**Background Information**: The purpose of this study is to better understand how RNs deal with workplace violence (WPV) and also how they feel it affects patient safety.  We hope in the future to create new ways to help RNs cope with WPV and develop interventions that will make the workplace safer for both RNs and patients.

**Procedures:** You will be asked questions regarding characteristics about the ED in which you work, how you have dealt with a recent workplace violent episode (if applicable to you), how well you feel supported at work during this type of situation and how you feel it affects patient safety. It will take you about 20 - 30 minutes.

**Benefits and Risks of being in the Study:**  There are no benefits to you as an individual from this research study.  There are no expected risks as well.  However, some of the questions may be of a personal or sensitive nature.  You may choose to not answer any question you do not want to answer.

**Compensation**: $5 Starbucks Gift Card and you will be put into a raffle for an iPad 2.

**Confidentiality:**  The records of this study will be kept private and saved on a USB.  In any sort of report we might publish, we will not include any information that will make it possible to identify you as a subject.  Research records and the USB will be kept in a locked file; only the principle investigator Rebekah Howerton Child and her advisor Dr.

Janet Mentes will have access to the records.  No identifying information will be kept in the files.

**Voluntary Nature of the Study:** Your decision to participate is entirely voluntary and you have the right to withdraw at anytime.  Your answers to questions will not be shared with your hospital and your decision regarding participation will not affect your job in any way.  Specifically, no one will know whether you choose to participate or not.

**Contact and Questions:** The researcher conducting this research is Rebekah Howerton Child.  You may ask any questions you have now.  If you have any questions later, you may contact the researcher at 818 – 632 – 9388.

If you wish to ask questions about your rights as a research participant or if you wish to voice any problems or concerns you may have about the study to someone other than the researchers, please call the Office of the Human Research Protection Program at 310 825-7122 or write to Office of the Human Research Protection Program, UCLA, 11000 Kinross Avenue, Suite 211, Box 951694, Los Angeles, CA 90095-1694

By Selecting "*NEXT*" on this webpage, your consent to participate is implied. A copy of this consent can be mailed to you at your request.

Protocol ID:IRB#12000169
UCLA IRB Approved Approval Date: 3/10/2012 Through: 3/9/2013 Committee: South General IRB

Appendix 2

Survey Tools

In the past month, while working in the ED, have you experienced any of the following types of verbal or physical violence? Please check all that apply.

Kicked

Voided on/vomited on purposefully

Hit by a thrown object(s)

Bitten

Grabbed/pulled

Pushed/shoved/thrown

Hair pulled

Scratched

Hit by a person

Spit on

Punched

Called names

Harassed with sexual language or innuendos

Threatened with legal action

Threatened with physical violence or weapons

Cursed at

Yelled or shouted at

14. In the past month, how many violent events have you experienced (including physical and verbal violence)?

0

1-3

4-6

more than 6

15. Who was the perpetrator(s) of the violence in the past month? Check all that apply.

Older adult/geriatric patient

Pediatric patient

Psychiatric patient

Trauma patient

Patient under the influence of alcohol

Patient under the inlfuence of illicit/prescription drugs

Someone known to you (significant other, spouse, friend, coworker, etc.)

Patient's visitor

Other (please specify)

**<u>Jaloweic Coping Scale</u>**
© 1977, 1987

For information regarding the use of this scale, please contact the author.

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## **Appraisal Scale**

Think about the most severe workplace violent event that happened to you while at work in the ED.  When thinking about this specific workplace violent event, please rate the following four statements using the scales below.

|  | Strongly agree | Agree | Neither agree nor disagree | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| You could change or do something about it. |  |  |  |  |  |
| You had to accept it. |  |  |  |  |  |
| You needed to know more before you could act. |  |  |  |  |  |
| You had to hold yourself back from doing what you wanted to do. |  |  |  |  |  |

# Survey of Perceived Organizational Support

Listed below are statements that represent possible opinions that YOU may have about working in your hospital's Emergency Department. Please indicate the degree of your agreement or disagreement with each statement by selecting the best answer that best represents your point of view about your ED.

| strongly disagree | moderately disagree | slightly disagree | neither agree nor disagree | slightly agree | moderately agree | strongly agree |
|---|---|---|---|---|---|---|
| | | | | | | |

The organization values my contribution to its wellbeing.

The organization fails to appreciate any extra effort from me.

The organization would ignore any complaint from me.

The organization really cares about my wellbeing.

Even if I did the best job possible, the organization would fail to notice.

The organization cares about my general satisfaction at work.

The organization shows very little concern for me.

The organization takes pride in my accomplishments at work.

## Teamwork and Safety Climate Survey

Please answer the following items with respect to working in the ED. Mark your responses using the scale below.

| Strongly Disagree | Slightly Disagree | Neither Agree nor Disagree | Slightly Agree | Strongly Agree |
| --- | --- | --- | --- | --- |
| | | | | |

Nurse input is well received in this clinical area.

In this clinical area, it is difficult to speak up if I perceive a problem with patient care.

Decision making in this clinical area are resolved appropriately (i.e., not who is right, but what is best for the patient).

The physicians and nurses here work together as a well coordinated team.

Decision making in this clinical area utilizes input from relevant personnel.

I am frequently unable to express disagreement with the attendings/staff physicians here.

It is easy for personnel here to ask questions when there is something they do not understand.

I have the support I need from other personnel to care for patients.
I know the first and last

names of all the personnel I worked with during my last shift.

Important issues are well communicated at shift changes.

Briefing personnel before the start of a shift is important for patient safety.

Briefings are common in this clinical area.

I am satisfied with the quality of collaboration that I experience with staff physicians in this clinical area.

I am satisfied with the quality of collaboration that I experience with nurses in this clinical area.

The levels of staffing in this clinical area are sufficient to handle the number of patients.

I would feel safe being treated here as a patient.

I am encouraged by my colleagues to report any safety concerns I may have.

Personnel frequently disregard rules or guidelines that are established for this clinical area.

The culture in this clinical area makes it easy to learn from the errors of others.

I receive appropriate feedback about my performance.

Medical errors are handled appropriately here.

I know the proper channels to direct questions regarding patient safety in this clinical area.

In this clinical area, it is difficult to discuss errors.

Hospital management does not knowingly compromise the safety of patients.

This institution is doing more for patient safety now, than it did one year ago.

Leadership is driving us to be a safety centered institution.

My suggestions about safety would be acted upon if I expressed them to management.

## **Intent to Leave**

Do you plan to leave your current job in the Emergency Department in the next year?

Yes

No

Not Sure

Does experiencing workplace violence affect your intent to leave?

Yes, definitely

Yes, somewhat

No, not at all

Not applicable