Donna M. Gates
Gordon L. Gillespie
Paul Succop

Violence Against Nurses and its Impact on Stress and Productivity

EXECUTIVE SUMMARY

► The purpose of this study was to examine how violence from patients and visitors is related to emergency department (ED) nurses' work productivity and symptoms of post-traumatic stress disorder (PTSD).

► Researchers have found ED nurses experience a high prevalence of physical assaults from patients and visitors. Yet, there is little research which examines the effect violent events have on nurses' productivity, particularly their ability to provide safe and compassionate patient care.

► A cross-sectional design was used to gather data from ED nurses who are members of the Emergency Nurses Association in the United States. Participants were asked to complete the Impact of Events Scale-Revised and Healthcare Productivity Survey in relation to a stressful violent event.

► Ninety-four percent of nurses experienced at least one post-traumatic stress disorder symptom after a violent event, with 17% having scores high enough to be considered probable for PTSD. In addition, there were significant indirect relationships between stress symptoms and work productivity.

► Workplace violence is a significant stressor for ED nurses. Results also indicate violence has an impact on the care ED nurses provide. Interventions are needed to prevent the violence and to provide care to the ED nurse after an event.

WORKPLACE VIOLENCE IS A major public health concern that has received growing national attention. Recent media attention to school and workplace shootings raised the level of civic consciousness regarding the adverse effects of violence. Most Americans know the phrase "going postal" indicates an employee who becomes hostile at work. According to a report by the U.S. Bureau of Justice Statistics, an estimated 1.7 million workers are injured each year due to assaults at work (Duhart, 2001). However, much of the public's focus on violence is on occupational environments that are exclusive of health care sites. And while the homicide rate against health care workers is lower than other establishments, the assault rate remains the highest (Bureau of Labor Statistics [BLS], 2007). In 2006, the BLS reported 60% of workplace assaults occurred in health care, and most of the assaults were committed by patients (BLS, 2007). Health care support occupations had an injury rate of 20.4 per 10,000 workers due to assaults, and health care practitioners had a rate of 6.1 per 10,000; this compares to the general sector rate of only 2.1 per 10,000. As significant as these numbers are, the actual number of incidents is much higher due to the gross underreporting that is related to the persistent perception assaults are part the job.

Among health care workers, nurses and patient care assistants (PCAs) experience the highest rates of violence. Emergency department (ED) nurses experience physical assaults at the highest rate of all nurses (Crilly, Chaboyer, & Creedy, 2004). In a study of Minnesota nurses, ED nurses were over four times more likely to report they had been

DONNA M. GATES, EdD, RN, FAAN, is Professor, College of Nursing, University of Cincinnati, Cincinnati, OH.

GORDON L. GILLESPIE, PhD, RN, FAEN, is Assistant Professor, College of Nursing, University of Cincinnati, Cincinnati, OH.

PAUL SUCCOP, PhD, is Professor, Department of Environmental Medicine, College of Medicine, University of Cincinnati, Cincinnati, OH.

assaulted compared with nurses in other units (Gerberich et al., 2005). Gates, Ross, and McQueen (2006) found 67% of nurses, 63% of PCAs, and 51% of physicians had been assaulted at least once in the previous 6 months by patients. Kowalenko, Walters, Khare, and Compton (2005) found 28% of emergency physicians indicated they were the victim of a physical assault the previous 12 months. A recent national study of 3,465 ED nurses found violence is highly prevalent and prevention is dependent on commitment from hospital administrators, ED managers, and hospital security (Gacki-Smith, Juarez, & Boyett, 2009).

Violence in the health care setting affects the employee, employer, and patients. In addition to physical injury, disability, chronic pain, and muscle tension, employees who experience violence suffer psychological problems such as loss of sleep, nightmares, and flashbacks (Findorff, McGovern, Wall, Gerberich, & Alexander, 2004; Gerberich et al., 2004; Levin, Hewitt, & Misner, 1998; Simonowitz, 1996). Health care workers who are assaulted experience short-term and long-term emotional reactions, including anger, sadness, frustration, anxiety, irritability, apathy, self-blame, and helplessness (Gates, Fitzwater, & Succop, 2003; Gillespie, Gates, Miller, & Howard, 2010; Hagen & Sayers, 1995; Pillemer & Hudson, 1993). Gates et al. (2003; 2006) found assaulted nursing assistants in long-term care were significantly more likely to suffer occupational strain, role stress, anger, job dissatisfaction, decreased feelings of safety, and fear of future assaults. Symptoms occurred regardless of whether an injury was sustained from the assault. Other researchers (Caldwell, 1992; Gerberich et al., 2004) found at-risk health care workers frequently suffer symptoms of post-traumatic stress disorder (PTSD). Laposa and Alden (2003) studied ED workers and

found 12% met full criteria for PTSD, 20% met the symptom criteria for the disorder, and the proportion of workers with PTSD was significantly higher than the general population. Research by Findorff-Dennis, McGovern, Bull, and Hung (1999) indicates the consequences of workplace violence continue after a violent event, affecting quality of life for years after the event. Other researchers found patient aggression is associated with the intention to leave the job and the nursing profession (Arnetz, Arnetz, & Soderman, 1998; Ito, Eisen, Sederer, Yamada, & Tachimori, 2001). For the employer, workplace violence impacts costs related to increased turnover, absenteeism, medical and psychological care, property damage, increased security, litigation, increased workers' compensation, job dissatisfaction, and decreased morale (Banaszak-Hall & Hines, 1996; Gerberich et al., 2004; Mesirow, Klopp, & Olson, 1998). McGovern et al. (2000) found 344 nonfatal assaults cost employers in Minnesota an estimated $5,885,448; costs included medical expenditures, lost wages, legal fees, insurance administrative costs, lost fringe benefits, and household production costs. The cost per case for assaults to registered nurses was $31,643 and $17,585 for licensed practical nurses.

The authors found only a small amount of research which examines the effect violent events have on health care workers' productivity, particularly their ability to provide safe and compassionate patient care after an event. The purpose of this study was to examine how the relationship of violence from patients and visitors is related to work performance and symptoms of PTSD in ED nurses.

Methods

Procedures. Prior to beginning the study, university institutional board review approval was

obtained. A cross-sectional design was used to gather data from ED nurses who are members of the Emergency Nurses Association in the United States. A survey was sent to a randomized sample of 3,000 nurses of which 264 surveys were returned and completed for a return rate of 8.8%. The survey consisted of four sections. The first section asked the participants to describe in narrative a single recent workplace violent event that caused them the most stress.

The second section of the survey consisted of the Impact of Events Scale-Revised (Weiss & Marmar, 1997), which assesses the presence and magnitude of post-traumatic stress symptoms during the 7 days after a traumatic event. The participants responded to 22 Likert-type items which asked about their symptomatic responses to the violent event in three areas (subscales): intrusion (e.g., intrusive thoughts, nightmares, imagery, re-experiencing), avoidance (e.g., numbing, avoidance of feelings), and hyperarousal (e.g., anger, irritability, difficulty concentrating). Participants are asked to identify how distressing each item had been for them during the 7 days after the violent event ranging from not at all (0) to extremely (4). The Impact of Events Scale-Revised has been used extensively as a quick measure of a person's response to trauma and has been shown to have high internal consistency ratings (0.79-0.91) and strong sensitivity (74.5) and specificity (63.1). Scores 24 or more indicate that PTSD is a clinical concern, scores 33 and more represent the cutoff for probable diagnosis of PTSD, and scores 37 or more are high enough to suppress the immune system (Kawamura, Kim, & Asukai, 2001).

The third section consisted of the Healthcare Productivity Survey, a 29-item instrument with four scales developed to measure the perceived change in work productivity after exposure to a

stressful event. The four scales include Cognitive Demands (e.g., concentration, keep mind on work), Workload Demands (e.g., complete your assignments on time, handle patient load), Support and Communication Demands (e.g., provide emotional support, be empathetic), and Competent and Safe Care Demands (e.g., be attentive to asepsis, administer medications without errors). Participants were asked to rate their ability to perform the work activity after the violent event as compared to before the event. Responses ranged from decreased ability (-2) to increased ability (+2). The development and testing of the Healthcare Productivity Survey is described in detail in Gillespie, Gates, and Succop (2010). Psychometric analysis demonstrated strong content and construct validity for the four subscales, internal consistency reliability (0.871 - 0.945), and test-retest reliability ($r = 0.801$, $p < 0.001$) with a sample of U.S. emergency nurses (Gillespie et al., 2010). Participants were asked in the fourth section, the demographic/occupational survey, to respond to questions regarding their age, gender, race, education, care population, the urbanicity of their ED, and whether their employer provides violence prevention training or critical incident stress debriefing.

Participants with missing data for the Impact of Events Scale-Revised or Healthcare Productivity Survey were excluded from analysis. Descriptive and bivariate statistics were calculated using version 17 of the Statistical Package for the Social Sciences (SPSS, Chicago, IL).

Results

Sample. Two hundred and thirty emergency nurses returned fully completed surveys of which 14% (n=32) were male and 86% (n=198) were female. Ninety-one percent were non-Hispanic White,

Table 1.
Employees and Employer Descriptives *

Participant Characteristics	n	%
Race		
White	224	91.1
Black	3	1.2
Hispanic	10	4.1
Asian/Pacific Islander	3	0.2
Native American	1	0.4
Multiple Races	2	0.8
Other	2	0.8
Gender		
Male	32	13.0
Female	198	80.5
Educational Level		
Diploma	13	5.3
Associate	58	23.6
Bachelor's	135	54.9
Master's	40	16.3
Previous CISD** training		
No	128	52.0
Yes	113	45.9
Workplace Characteristics	**n**	**%**
Location		
Urban	107	43.6
Suburban	85	34.6
Rural	53	21.5
Census Volume		
<25,000	40	16.3
25,000-49,000	64	26.0
50,000-74,999	64	26.0
75,000-99,999	45	18.3
100,000+	29	11.8
Patient Population		
Adult	56	22.8
Pediatrics	10	4.1
General/Adult and pediatrics	180	73.2
Violence Prevention Training		
No	90	36.6
Yes	148	60.2
Employer Provides CISD** Training	**n**	**%**
No	95	39.6
Yes	145	60.4

* Categories do not add up to 100% due to the unanswered survey items.
** Critical Incident Stress Debriefing

Table 2.
Descriptions for the Healthcare Productivity Survey (HPS) and Impact of Event Scale-Revised (IES-R)

	N	Number of Items	Mean	Standard Deviation	Minimum	Maximum
HPS						
Cognitive demands	220	5	-0.74	2.72	-10	7
Handle/manage workload	220	6	-0.49	2.33	-8	9
Support and communication with patients/visitors	222	6	-0.18	3.62	-12	12
Competent and safe care	221	10	0.68	3.74	-11	20
Total	224	27	-0.05	14.26	-49	66
IES -R						
Avoidance	219	8	6.0	6.28	0	28
Intrusion	222	8	7.86	7.16	0	32
Hyperarousal	220	8	4.93	4.92	0	24
Total	224	24	18.67	16.82	0	83

while 9% represented Blacks, Asian-Pacific islanders, and Native Americans. Demographics are described in Table 1.

Healthcare Productivity Survey (see Table 2). Thirty seven percent (n=82) of the participants had a negative total productivity score, demonstrating decreased performance after a violent event; the mean total productivity score for the group was -0.05. All scales except the Safe and Compassionate Care scale had a negative mean score, indicating a decrease in performance. Individual items with the highest frequency of participants reporting decreased performance included: (a) Cognitive Demand items "keep mind on work" (32%), "think clearly" (26%), "concentrate on work" (23%), "control emotional reactions while working with co-workers" (26%); and (b) Support and Communication Demand items "provide emotional support to patients" (25%), "provide emotional support to families" (22%), "be empathetic with patients and families" (25%), "control emotional reactions" (22%).

Impact of Event Scale-Revised (see Table 3). Ninety-four percent (n=209) of participants had a total Impact of Event Scale-Revised score that indicated the presence

of at least one stress symptom after a violent event; the mean score for the group was 18.67 (range 0-83). Twenty-five percent (n=58) had total scores of 24 or higher, 17% (n=39) had total scores of 33 and over, and 15% (n=34) had scores of 37 or higher. The Intrusion Scale had the highest mean at 7.86 (range 0-32).

The intrusion scale had the highest means with the following items having the highest percentage of nurses with symptoms: "any reminder brought back feelings about it" (82.5%), "I thought about it when I didn't mean to" (69%), "pictures about it popped into my mind" (67%), and "I had waves of strong feelings about it" (68%). The avoidance scale had the second highest mean with the following items with the highest frequency of those having symptoms: "I avoided letting myself get upset when I thought about it or was reminded of it" (65%) and "I tried not to think about it" (57%). Hyperarousal scale items with the greatest number of participants experiencing the symptom included: "I felt watchful and on guard" (73%), "I felt irritable and angry" (67%), "other things kept making me think about it" (67%), and "I was jumpy and easily startled" (48%). Items on the avoidance scale with the

highest frequencies included "I avoided letting myself get upset when I thought about it or was reminded by it" (65%) and "I tried not to think about it" (57%).

Two intrusion scale items had results where almost a quarter of the participants responded they not only experienced the symptom but experienced it often and very often. This included 22% for the item "any reminder brought back feelings about it" and 22% for the item "watchful and on-guard" after the violent event.

Correlation between Health Productivity Survey and Impact of Events Scale-Revised scores. Table 2 shows the relationships between the group's Healthcare Productivity Scale and Impact of Event Scale-Revised scores. There were significant findings between the Impact of Events Scale-Revised scores (total and three subscales) and the Cognitive Demands and Support Communication Demands. Correlations between the two total scores (Impact of Event Scale-Revised and Healthcare Productivity Survey) was near significance ($p=0.07$).

Discussion

The results from this study support the growing literature

Table 3.
Correlations Between Healthcare Productivity Survey and Impact of Event Scale-Revised Scores

Scale	Cognitive Demands		Workload Demands		Support/ Communication Demand		Safe/ Compassionate Care Demands		Total HPS Score	
	r	p	r	p	r	p	r	p	r	p
Avoidance	-0.18	0.01	-0.04	0.56	-0.16	0.02	0.10	0.16	-0.07	0.28
Intrusion	-0.26	<0.0001	-0.11	0.11	-0.16	0.02	0.05	0.48	-0.13	0.05
Hyperarousal	-0.26	<0.0001	-0.09	0.16	-0.15	0.02	-0.03	0.63	-0.13	0.05
Total EIS-R Score	-0.26	0.0001	-0.09	0.18	-0.17	0.01	0.06	0.34	-0.12	0.07

about traumatized persons and the increasing recognition of the negative effects that traumatic events, such as violence, have on workers. In 1980, the American Psychiatric Association included PTSD in their Diagnostic and Statistical Manual Mental Disorders for the first time. It was documented that direct and indirect exposure to violence may result in serious psychological effects (Figley, 1995). It is not unusual for workers to experience anxiety after being threatened or assaulted by a patient or visitor and for a short time period afterwards. The prevalence of study participants with post-traumatic stress symptoms during the 7 days after a violent event is significant. Seventeen percent had scores high enough to be considered probable for a diagnosis of PTSD and 15% had scores associated with suppressed immune system functioning.

The results from this study supported other researchers who have found workers suffering from PTSD symptoms experience distressing emotions, difficulty thinking, withdrawal from patients, absenteeism, and job changes (Figley, 1995; Herman, 1992; Laposa & Alden, 2003; Laposa, Alden, & Fullerton, 2003; McCann & Pearlman, 1990; 1992).

In the current study, exposure to violent events was significantly related to decreased productivity in the areas of Cognitive Demands and Support/Communication Demands. These findings suggest that

whereas ED nurses report they are able to continue to maintain their usual pace of work and provide safe and competent care, they have more trouble remaining cognitively and emotionally focused while working after a violent event.

The correlation between the total Healthcare Productivity Survey and Impact of Event Scale-Revised scores was close to reaching statistical significance. Each of the three Impact of Event Scale-Revised scores and the total Impact of Event Scale-Revised score were highly significantly related to the Cognitive Demands and Support/Communication Demands. The more stress symptoms reported by a participant, the more difficulty the ED nurse had with these two areas of productivity. The hyperarousal criterion is a manifestation of dysregulation of the stress-response system and persons with these symptoms are often quick to react with irritability, hostility, anger, and anxiety (Wilson, 2004). These symptoms are likely to have an impact on the ability of the nurse to communicate with patients and visitors, and to provide emotional support when they themselves are in need of such support. It is also possible those with hyperarousal symptoms would have difficulty thinking, concentrating, and with other cognitive functions (Wilson, 2004).

Persons with avoidance symptoms often experience feelings of detachment, and may distance themselves from others. They may

have a decreased capacity for tolerating or experiencing emotions. While these efforts serve as a coping mechanism to control hyperarousal symptoms, they can affect the nurse's ability to relate to her or his patients and co-workers.

Intrusion symptoms are characterized by nightmares and visual images of the trauma event itself or its aftermath. The mean for intrusion symptoms was the highest of the three scales, indicating the highest frequency of participants experiencing the symptoms. This could be due to the fact the participant has to return to the place (the ED) where the event occurred. It is likely intrusion symptoms would impact the nurse's ability to concentrate and to provide compassionate care. Health care providers admit that after violent experiences they tend to avoid patients who have been or might be violent (Gates, Fitzwater, & Meyer, 1999; Gillespie et al., 2010).

At first review it is remarkable the PTSD symptoms were not significantly related to productivity areas of Workload and Safe/Competent Care Demands. There are two possible explanations for this finding. First, participants may not have felt comfortable admitting to unsafe behaviors on a survey or may not even be consciously aware they had changes in performance. Second, an understanding of both the characteristics of ED nurses and the type of work they provide may help to explain these findings. Emergency department nurses are

experienced and trained to provide care to patients often in very stressful situations. This includes working under extreme time pressures while taking care of acutely ill patients often without any or a complete diagnosis. ED nurses work in fast-paced environments and because emergency departments are often overcrowded, ED nurses become adept at multitasking to prioritize their patient care and their time. There is a body of research showing well-learned tasks are more resistant to the negative effects of stress (Beilock, Carr, MacMahon, & Starkes, 2002; Bracco, Giannetti, & Pisano, 2010). This phenomenon is often referred to as *cognitive resilience,* which is the capacity to overcome the negative aspects of an event and its associated stress on cognitive function or performance. The level of cognitive processing for completing routine patient care does not require a lot of attention resources since the required skills and procedures are repetitive actions that have been highly honed by ED nurses. These quickly performed skills are often executed "more automatically." In contrast, emergency nurses are likely to have more difficulty coping with unfamiliar and unpredicted events such as violence for which few have any or little training on how to prevent or manage. This reduced capacity to cope is likely to result in greater difficulty in managing higher-level work demands that require concentration, attention to detail, or communication skills.

Researchers found that as the mental health of workers with PTSD improved, productivity also improved. Immediate interventions, during the first hours or days after a trauma, can provide the victim with the support system currently lacking in most health care facilities. Implementation of a critical incident stress debriefing (CISD) can prevent the more serious, long-term complications associated with exposure to traumatic events (Flannery & Everly, 2000;

Kaplan, Iancu, & Bodner, 2001). By providing a support system composed of peers and administrative representatives, employees have an opportunity to process the event and put it into perspective (Antai-Otong, 2001), thus minimizing the short and long-term symptoms related to stress and anxiety (Flannery & Everly, 2000; Kaplan et al., 2001; Mitchell, 2000). Such interventions would help alleviate the stress for the nurse but also has the potential to improve the quality of care received by patients.

Nurses admit that unless they are physically injured, they are often expected to return immediately to their work after being physically assaulted by a patient or visitor (Emergency Nurses Association, 2010; Gates et al., 2011). Most nurses do not report violent incidents believing that reporting does not make any difference since violence is expected and tolerated, that incidents are seen as a sign of their incompetence, or that they might encounter retaliation by ED management and hospital administration. Executives may feel such reports have a negative effect on patient satisfaction reports. This ED culture contributes to the belief ED nurses need to be tough, resilient, and are not easily intimidated or shaken by stressful events. (Emergency Nurses Association, 2010; Gacki-Smith et al., 2009; Gates et al., 2006; Gates et al., 2011). In a recent focus study by Gates et al. (2011), a participant stated "it's not a good day in the ED if you haven't been verbally abused...or someone's taken a swing at you." Another quote during this same study by a nurse was: "You need to walk away for a minute and then you have to put your game face back on and get back out there."

Few ED nurses report they participated in any formal or informal debriefing after a violent event (Gates et al., 2006; Gates et al., 2011). This lack of attention to the emotional effects of violence can contribute to PTSD symptoms.

Nurse administrators need to recognize the impact violence against health care workers has costs related to increased turnover, absenteeism, medical and psychological care, property damage, increased security, litigation, increased workers' compensation, job dissatisfaction, and decreased morale. In addition, the results of this study provided new data about the productivity losses due to performance changes that often occur after a nurse is assaulted. Nurse managers need to recognize many ED nurses experience stress symptoms due to violence and seek to recognize and refer them for counseling or forms of support. The Joint Commission (2010) recently released a Sentinel Event Alert related to the increasing violence in the health care setting and the steps that hospital administrators and managers need to take to protect both employees and patients.

Limitations

This was a cross-sectional study; thus it is not possible to identify the cause and effect of relationships among productivity, stress symptoms, and violent events. In addition, there was no measurement of the perceived severity of the violent event, and thus, no way to examine the relationship among severity, symptoms, and productivity. As is common with survey studies, the use of self-report data may be limited by errors due to the nurses' poor recall of violent events and their perception of post-event stress symptoms and productivity. Another potential limitation of the results is the response rate of 8% and the inability to compare the responses of the responders with the non-responders. A post hoc power analysis was conducted to determine if the study had an adequate sample size to perform the planned statistical analyses. Achieved power was 85% for workplace violence data with the sample size of 220 in addition to using a two-sided statistic, a small to medium effect size of 0.20,

and an alpha level of 0.05. So, even though only 8% responded, the findings are still powerful.

Conclusion

Workplace violence is a significant problem for ED nurses and has a direct relationship to experiences of negative stress, decreased work productivity, and quality of patient care. It is critical prevention and management of violence be a priority for hospital administration and ED management. Foremost, violence should never be accepted and tolerated as part of the job. Second, workplace policies and procedures are needed that focus on the security of the environment, reporting and surveillance, and education for all employees and managers on how to prevent and manage violence. When violence does occur, it is critical that formal or informal debriefing be offered to ED nurses experiencing violence.

Future research should be conducted to identify best practices for preventing violence and for the provision of stress debriefing after a violent incident. Research also needs to be conducted to determine the relationship of violence severity to the change in work productivity. In addition, it is not clear why some ED nurses appear to be cognitively resilient to the stressful effects of violence and the consequences it has on work performance. It is also important to examine how violence affects the stress and work productivity of nurses working in other hospital departments. **$**

REFERENCES

American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.). Washington, DC: American Psychiatric Association.

Antai-Otong, D. (2001). Critical incident stress debriefing: A health promotion model for workplace violence. *Perspectives in Psychiatric Care, 37*(4), 125-132, 139.

Arnetz, J.E., Arnetz, B.B., & Soderman, E. (1998). Violence toward health care workers: Prevalence and incidence at a large, regional hospital in Sweden. *American Association of Occupational Health Nurses Journal, 46*(3), 107-114.

Banaszak-Hall, J., & Hines, M. (1996). Factors associated with nursing home staff turnover. *The Gerontologist, 36*(4), 512-517.

Beilock, S.L., Carr, T.H., MacMahon, C., & Starkes, J.L. (2002). When paying attention becomes counterproductive: Impact of divided skill-focused attention on novice and experienced performance of sensorimotor skills. *Journal of Experimental Psychology: Applied, 8*(8), 6-16.

Bracco, F., Gianatti, R., & Pisano, L. (2008). Cognitive resilience in emergency room operations, a theoretical framework. In E. Hollnagel, F. Pieri, & E. Rigaude (Eds.), *Proceedings of the Third on Resilience Engineering Symposium,* October 28-30, 2008, Antibes–Juan-les-Lins, France.

Bureau of Labor Statistics (BLS). (2007). *Nonfatal occupational injuries and illnesses requiring days away from work.* Press release. Retrieved from http://www.bls.gov/news.release/osh2.nr0.htm

Caldwell, M.F. (1992). Incidence of PTSD among staff victims of patient violence. *Hospital & Community Psychiatry: A Journal of the American Psychiatric Association, 43*(8), 838-839.

Crilly, J., Chaboyer, W., & Creedy, D. (2004). Violence towards emergency department nurses by patients. *Accident and Emergency Nursing, 12*(2), 67-73.

Duhart, D. (2001). *Violence in the workplace, 1993-1999: A special report from the National Crime Victimization Survey* (No. NCJ 190076). Washington, DC: U.S. Department of Justice.

Emergency Nurses Association. (2010). *More than half of emergency department nurses have been physically assaulted at work, new study finds.* Retrieved from http://www.ena.org/MEDIA/PRESSRELEASES/Pages/WorkPlaceViolence.aspx

Figley, C.R. (1995). *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized.* New York: Brunner-Routledge.

Findorff-Dennis, M.J., McGovern, P.M., Bull, M., & Hung, J. (1999). Work related assaults: The impact on victims. *AAOHN Journal, 47*(10), 456-465.

Findorff, M.J., McGovern, P.M., Wall, M., Gerberich, S.G., & Alexander, B. (2004). Risk factors for work related violence in a health care organization. *Injury Prevention, 10*(5), 296-302.

Flannery, R.B., Jr., & Everly, G.S., Jr. (2000). Crisis intervention: A review. *International Journal of Emergency Mental Health, 2*(2), 119-125.

Gacki-Smith, J., Juarez, A.M., & Boyett, L. (2009). Violence against nurses working in US emergency departments. *Journal of Nursing Administration, 39*(7-8), 340-349.

Gates, D., Fitzwater, E., & Meyer, U. (1999). Violence against caregivers in nursing homes: Expected, tolerated, and accepted. *Journal of Gerontological Nursing, 25*(4), 12-22.

Gates, D., Fitzwater, E., & Succop, P. (2003). Relationships of stressors, strain, and anger to caregiver assaults. *Issues in Mental Health Nursing, 24*(8), 775-793.

Gates, D., Gillespie, G., Smith, C., Rhode, J., Kowalenko, T., & Smith, B. (2011). Using action research to plan a violence prevention program for emergency departments. *Journal of Emergency Nursing, 37*(1), 32-39.

Gates, D., Ross, C.S., & McQueen, L. (2006). Violence against emergency department workers. *Journal of Emergency Medicine, 31*(3), 331-337.

Gerberich, S.G., Church, T.R., McGovern, P.M., Hansen, H.E., Nachreiner, N.M., Geisser, M.S., ... Watt, G. (2004). An epidemiological study of the magnitude and consequences of work related violence: The Minnesota Nurses' Study. *Occupational and Environmental Medicine, 61*(6), 495-503.

Gerberich, S.G., Church, T.R., McGovern, P.M., Hansen, H., Nachreiner, N.M., Geisser, M.S., ... Jurek, A. (2005). Risk factors for work-related assaults on nurses. *Epidemiology, 16*(5), 704-709.

Gillespie, G.L., Gates, D.M., & Succop, P. (2009). Psychometrics of the healthcare productivity survey. *Advanced Emergency Nursing Journal 32*(3), 258-271. doi:10.1097/TME.06013e3181e975101.

Gillespie, G.L., Gates, D.M., Miller, M., & Howard, P.K. (2010). Violence against healthcare workers in a pediatric emergency department. *Advanced Emergency Nursing Journal, 32*(1), 68-82.

Hagen, B.F., & Sayers, D. (1995). When caring leaves bruises: The effects of staff education on resident aggression. *Journal of Gerontological Nursing, 21*(11), 7-16.

Herman, J. (1992). *Trauma and recovery.* New York: Basic Books.

Ito, H., Eisen, S.V., Sederer, L.I., Yamada, O., & Tachimori, H. (2001). Factors affecting psychiatric nurses' intention to leave their current job. *Psychiatric Services, 52*, 232-234.

Kaplan, Z., Iancu, I., & Bodner, E. (2001). A review of psychological debriefing after extreme stress. *Psychiatric Services, 52*(6), 824-827.

Kawamura, N., Kim, Y., & Asukai, N. (2001). Suppression of cellular immunity in men with a past history of posttraumatic stress disorder. *American Journal of Psychiatry, 158*(3), 484-486.

Kowalenko, T., Walters, B.L., Khare, R.K., & Compton, S. (2005). Workplace violence: A survey of emergency physicians in the state of Michigan. *Annals of Emergency Medicine, 46*(2), 142-147.

Laposa, J.M., & Alden, L.E. (2003). Posttraumatic stress disorder in the emergency room: Exploration of a cognitive model. *Behaviour Research and Therapy, 41*(1), 49-65.

Laposa, J.M., Alden, L.E., & Fullerton, L.M. (2003). Work stress and posttraumatic stress disorder in ED nurses/personnel. *Journal of Emergency Nursing, 29*(1), 23-28.

Levin, P.F., Hewitt, J.B., & Misner, S.T. (1998). Insights of nurses about assault in hospital-based emergency departments. *Image Journal of Nursing Scholarship, 30*(3), 249-254.

McCann, I.L., & Pearlman, L.A. (1990). *Psychological trauma and the child survivor: Theory, therapy, and transformation.* New York: Brunner/Mazel.

McCann, I.L., & Pearlman, L.A. (1992). Constructivist self-development theory: A theoretical framework for assessing and treating traumatized college students. *Journal of American College Health, 40*(4), 189-196.

McGovern, P., Kochevar, L., Lohman, W., Zaidman, B., Gerberich, S.G., Nyman, J., & Findorff-Dennis, M. (2000). The cost of work-related physical assaults in Minnesota. *Health Services Research, 35*(3), 663-686.

Mesirow, K.M., Klopp, A., & Olson, L.L. (1998). Improving certified nurse aide retention. A long-term care management challenge. *Journal of Nursing Administration, 28*(3), 56-61.

Mitchell, M. (2000). Anxiety management: A distinct nursing role in day surgery. *Ambulatory Surgery, 8*(3), 119-127.

Pillemer, K., & Hudson, B. (1993). A model abuse prevention program for nursing assistants. *The Gerontologist, 33*(1), 128-131.

Simonowitz, J.A. (1996). Health care workers and workplace violence. *Occupational Medicine, 11*(2), 277-291.

The Joint Commission. (2010). Preventing violence in the workplace. *Sentinel Event Alert, Issue 45.* Retrieved from http://www.jointcommission.org/sentinel_event_alert_issue_45_preventing_violence_in_the_health_care_setting_/

Weiss, T. & Marmar, D.S. (1997). The Impact of Event Scale-Revised. In J.P. Wilson & T.M. Deane (Eds.), *Assessing psychological trauma and PTSD* (pp. 399-411). New York: Guilford Press.

Wilson, J.P. (2004). PTSD and complex PTSD, symptoms syndromes, and diagnoses. In J.P. Wilson & T.M. Dean (Eds.), *Assessing psychological trauma and PTSD* (pp. 7-44). New York: Guilford Press.

ADDITIONAL READING

Marmar, D.S., Weiss, T., Metzler, T., & Delucchi, K. (1996). Characteristics of emergency service personnel related to peritraumatic dissociation during critical incident exposure. *American Journal of Psychiatry, 153*(7), 94-102.