Predisposing Factors of Violence against Nurse in Emergency Department from Nurses’, Patients’, and accompanies’ perspective

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Key words
workplace violence, predisposing factors of violence, nurse, emergency

Abstract
Aim and background: Workplace violence is a warning phenomenon all over the world. Health caregivers, especially nurses in emergency department, are severely exposed to workplace violence. Therefore, this research has been done to determine risk factors of violence in the emergency room from the perspective of each group.
Method: A cross-sectional comparative-descriptive design was used in this study. Data were collected by using a researcher-made questionnaire. Confirming the content validity, we used the perspective of ten experts in nursing major with related expert and publications on phenomenon of interest. The alpha Cronbach’s coefficient (93%) confirmed the reliability of this tool. 307 nurses, patients and patients’ accompanies filled out the questionnaire. The data analyzed by SPSS software version 21 by using inferential statistics (Pearson correlation test, χ² test and descriptive statistics (frequency, percent).
Results: According to the findings from nurses’ and their accompanies’ viewpoint, small and crowded emergency department and from patients’ viewpoint, long waiting time for diagnostic–therapeutic tests are the most important predisposing factors of violence. Among none of these three groups perspective in relation to the occurrence of violence against nurses no meaningful statistic relationship was found. But about environmental factors, a significant statistical relationship was found between nurses and patients views with (r=0.221) correlation coefficient.
Conclusions: According to the findings, responsible authorities in health system should consider some arrangements to prevent, control and reduce incidence of violence against nurses and consequently make these three groups satisfied with health system and ultimately lead to improve the quality of health care.
**Introduction:** Workplace violence (W.P.V) according to WHO in 2003 generally defined as “Incidents where staff are abused, threatened or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, wellbeing or health”[28] it is an alarming phenomenon worldwide that finds its expression in physical assault, homicide, verbal abuse, threat, bullying/mobbing, sexual and racial harassment and psychological stress[28] it is a serious occupational risk for domestic and global workplace that according to American Association of occupational health nurses statistics in 2008 it is accounting for approximately 900 death and 1.7 million nonfatal assaults each year in the United States[13]. According to U.S Bureau of labor statistics 5 percent of all occupations have experienced 1 workplace violence each year that in larger organizations with more than thousand employees about 50 percent of occupations experienced W.P.V. approximately 60 percent of nonfatal violence is related to health and social care center. Among them three forth of violence is caused by patients and residents of health center. In average, staff leave their work 5 days due to violence, however more than a forth of these staff leave their work more than 21 days[13]. Violence happened dramatically in health care center and against the past belief, even hospitals are not considered a safe place[33]. Workplace violence rarely leads to death in health care center, however the highest rate of physical assaults and injuries of workplace violence are occurred in these centers. According to bureau of labor statistics in 2002 six percent of workplace violence has happened in health center and the patients have been the greatest perpetrators of violence[21]. Evidence from many studies reveals that workplace maltreatment results in nervousness, fear, anxiety, depression, sleep disturbance, increased sick leave, symptoms of Post Traumatic Stress Disorder (PTSD) and nurses dissatisfaction of their job[8]. In addition the nurses may leave the current workplace and even leave their job forever. Abusive behavior towards health care provider has significant effect on quality of care to patients and leads to dysfunction, reduction of efficiency and increase of mistake. On the other hand, violence through decrease of work days, decrease of productivity and increase of expenses cause a negative impact on the hospital management[8, 9]. Nurses working in emergency department more than nurses in other wards are exposed to violence[2]. Discussions during the focus groups with ED managers, employees, and patients supported the data showing that violence in the emergency department is increasing, that it is a major concern for those who work and visit emergency departments[14]; Although there are numerous studies that show that emergency department (E.D.) violence is a prevalent and serious problem for healthcare workers. In Minnesota emergency nurses were 4 times more likely to report that they had been assaulted compared with nurses in other units[5][18]. People have different perspective about one specific topic, so comparing these three groups view leads
to comprehensive knowledge about risk factors of violence against nurses, there is a lack of published evaluations to identify the predisposing factors of violence against nurses in emergency department from nurses, patients and accompanides perspective.

**Limitations:** There are many demographic and cultural differences in different parts of Iran. although this study was done in different region of Tehran (capital of Iran), the result can not be reflection of social and cultural situation in Iran. Therefore it can not be generalized. It is probable that those nurses who have experienced more violence or patients and accompanides who have complained more about current situation in medical center were more inclined to complete the questionnaire. explaining the purpose of research and classified sampling method reduced this restriction.

**Methods: Design and sampling:** A cross sectional comparative – descriptive design was used in this study. It is done to identify predisposing factors of violence against nurses in emergency departments of hospitals affiliated to Tehran and Iran University of Medical Science. The statistical population of this study consist of nurses, patients and accompanides in selected hospitals. Inclusion criteria for nurses was at least bachelor degree and a minimum of six months experience working in E.D. patients were selected among those who admitted just for physical problems, not for alcoholic, drugs and psychotropic drug poisoning. They must be alert and not have severe pain and acute problems moreover they should have received initial care. Accompanides were anyone who brought the patients to the ward and were willing to fill the questionnaire. The necessary approval was obtained from the ethical committee and research council of Tehran and IranUniversity of Medical Science. Introduction letter was submitted to the official of hospitals, then researcher in different shifts after getting satisfaction of qualified populations distributed the questionnaire among them. It was mentioned in the questionnaire that the information will be kept confidential and there is no need to write the name. from 350 questionnaires distributed, 43 were partially completed, so excluded from the study and were not analyzed .the overall response rate to the questionnaire was about 88 percent. Selected population consisted of 107 nurses, 100 patients and 97 accompanides. Data collection were from June to September 2013. Data were collected by using a researcher -made questionnaire that has 2 parts included demographic information and the main parts consist of 43 items about the predisposing factors of violence that were classified in 6 groups( factors related to environment, Factors related to health care facilities management, factors related to employee, patient,visitor and time). Confirming the content validity, we used the perspective of ten experts in nursing major with related expert and publications on phenomenon of interest. The alpha Cronbach’s coefficient (93%) confirmed the reliability of this tool. The data
analyzed by SPSS software version 21 by using inferential statistics (Pearson correlation test, $\chi^2$ test and descriptive statistics (frequency, percent).

**Findings:** The findings of this research revealed that there were an equal number of women and men (152 male, 152 female). Most of the nurses were women (63.6%), but most of the patients (64%) and accompanities (50.5%) were men. The average age in nurses, patients and accompanies groups were 33.07±7.29, 39.5±12.02, 35.3±11.07 respectively. The majority of these three groups had academic education. In terms of income level, nurses and accompanies were satisfied to some extent, but patients had inadequate level of income. The largest number of the nurses had the range of 0.5 to 5 years working experience in E.D. (76.6%). Most of the accompanies were patient’s family (80.4%).

The results of this study showed that violence is common in E.D. 92.5% of nurses, 48% of patients and 47.4% of accompanies witnessed violence that in nurses group in order of frequency included verbal violence (42.67%), physical violence (28.8%) and threat (21.03%), in patients group included verbal violence (31.2%), physical violence (10.2%), threat (6.6%) and in accompanies group included verbal violence (34%), threat (8.75%) and physical abuse (4.65%).

From the nurses perspective, every 6 groups of predisposing factors (factors related to environment, management, employee, patient, accompany and time) had a significant effect on the incidence of violence that the most important group was factors related to time ($r=0.775$) that not physician availability in time and long waiting time for diagnostic and therapeutic interventions with score 4/1 and 4.02 out of 5 in liker t scale were the most important factors in this group. Among 43 items, the main factors of violence respectively were small and overcrowded ED, patient’s death, high accompany number, lack of security guard, not physicians availability in time and weak management about not following the previous reports about violent events. Also from patients and visitors attitude, every 6 groups of factors have an important role in incidence of violence. From patient’s attitude the most important group was the factors related to the patient ($r=0.818$) that severe pain and discomfort and patient death with score 4.1 and 4 out of 5 in likert scale had largest frequency in this group. Among 43 items, the most important factors were long waiting time, visitors anxiety and stress due to bad and critical condition of patients, severe pain and discomfort of patients, small and overcrowded E.D, high expenses for treatment and the nurses indifference about patient’s and visitor’s request. From accompany view, the most important group was factors related to the time ($r=0.743$) that long waiting time and not quick reception of patients with score 3.98 and 3.87 out of 5 were the principle causes of violent. among 43 items, the main factors for violence were small and overcrowded E.D, visitor’s anxiety and stress due to bad and critical
condition of patients, long waiting time, high expenses for treatment, long time fasting for sampling and diagnostic- therapeutic interventions and shortage of staff respectively. The most important factors of violence from these three groups perspective illustrated in chart A.

Chart A: The most important predisposing factors of violence in each aspect

**Discussion**: The findings revealed that nurses(92.5%) in comparison with patients(48%) and accompanies(47.4%) observed more violence. Since the E.D. is the nurses workplace where they spend many hours, this result is considered logical. Verbal abuse was the greatest kind of violence in these three groups like other studies: verbal:45.9%, physical:6.4%[23]; verbal:92%, physical:30%[35]; verbal:98.5%, physical:19.7%[30];verbal:64%, threat:27.93%, physical: 7%[7]. This result is also expectable, because each quarrel and dispute usually starts with verbal misbehavior maybe followed by threat, bullying , mobbing, etc. Predisposing factors of violence in various hospitals differs according to location, size, type of care which is provided and the shifts [34]. In this study From nurses, patients and accompanies perspective the most important group of predisposing factors of violence were factors related to the time, patient and
time respectively \( r = 0.775, r = 0.818, r = 0.743 \). It is illustrated in table B. About factors in each group according to the findings, from nurses’ and their accompanies’ viewpoint, small and crowded emergency department and from patients’ viewpoint, long waiting time for diagnostic–therapeutic tests are the most important predisposing factors of violence. According to LauB findings risk factors of violence are classified into environmental, situational and interactional factors which long waiting time and lack of nurses are sample of these ones[25]. Hahn in his study suggest that environmental factors such as long waiting time, lack of staff and implement of hospital rules affected on the occurrence of violence against nurses[20]. Patients and accompanies expect upon arrival at E.D. to be visited by nurses and physicians, but conditions such as shortage of staff, traumatic patients presence, nurses chang of shift, overcrowded ward, not availability of doctors and nurses in time and performing tasks related to admission before visiting patient increase the waiting time and may lead to nervousness. In creedy research long waiting time was not the causative agent of violence, since upon entry to E.D. they committed violence[10].

Lack of armed and trained security guard, 24 hours availability of E.D., stressful environment, trauma, acute illness, patient’s pain and discomfort, stress and nervousness of patients and visitors, death, small environment, lack of privacy, inappropriate interpersonal interactions, long waiting time for admission and visiting by physicians and poisoning are the most important factors for occurring physical and verbal violence against employee in E.D. [4, 12, 13, 19, 24]

In Jenkins study the significant reasons for violence were alcoholic abuse (98%), long waiting time (86%), drug abuse (85%), high patients expectations (82%) and staff attitude (55%) [22]. The most common factors for violence were cognitive disorder like dementia, brain damage and developmental retardness (79.1%), drug abuse (60.5%), long waiting time (55.8%) and policy of visiting at E.D. (38.4%) [26]. In other researchers study risk factors included shortage of staff and facilities, lack of proper relationship between nurses and doctors and not being supported by head nurses and supervisors [31]; poor quality of team work, uncertainty in treatment, young age, being a nurse aid, night shift and working at stressful hours [9]. Risk factors related to patients and visitors consisted of mental disorders, alcoholic and drug abuse, being victim of violence in the past, the inability to cope with situational crisis, havin weapon, and risk factors related to personnel included age, sex, work experience, weakly work hours, marital status and training in advance related to workplace violence [19]; lack of privacy in triage and waiting room, overcrowded and messy E.d. and drug and alcoholic abuse [25].
Some researchers declare inability of patients and their families in coping with crisis situations have effect on their violent behavior[6,8,19]. For example, the experience of stress in critical situations may be greater than the tolerance level of the patient and their relatives compared to normal conditions [5]. From all three groups perspective, small and overcrowded E.D. was one of the most important factors of violence like other studies[1, 3]. Also, in the present study according to each group perspective, alcoholic abuse was not a main factor in occurrence of violence. It can be justified that in Iran in comparison to western societies, alcoholic consumption is lower due to Islamic culture. From these three groups, highest score about alcoholic consumption belonged to nurses group (nurses: 4.21, patients: 3.54 and accompanies 3.62 out of 5 in Likert scale). It can be justified that nurses by more presence in hospital may observe more violence related to alcoholic abuse, on the other hand, patients and accompanies because of bad social reputation may conceal alcoholic consumption. Also, access to weapons like alcoholic abuse because of the same reason was not a main factor for incidence of violence and again, high score about it given by nurses in comparison to patients and accompanies (nurses: 3.92, patients: 3.32, accompanies: 3.35 out of 5).

In this study, one of the main factors of violence from nurses viewpoint was poor management related to not following the previous reports about violence. Furthermore, there was a statistical meaningful correlation between the degree of satisfaction of violence control and factors related to management. Most of the nurses (63.7%) were not gratified about violence control at their workplace. In Esmaeelpour study, 74.3% of nurses in physical violence and 66.9% in verbal violence were thoroughly displeased about violence management[11]. According to these findings, nurses may not feel safe and they don’t have enough motivation to report violence, also they accept violence as a part of their job. So responsible authorities in health system should consider reported violence. It may results in increase of nurses motivation for reporting happened violence.

Nurses indifference about patients and visitors requests had lowest score in nurses group (patient: 3.88, accompanies: 3.82, nurses 2.93 out of 5). In one hand, nurses don’t tend to accept their indifference, on the other hand, nurses viewpoint about patient’s conditions and requests differ from patients and accompanies perspective, for example, nurses may not consider patients conditions as serious as they can see or in another example, patients think that they may need an immediate visit by specialist while from nurses view visit by general physician is sufficient or based on hospital protocol they should be visited by general physicians before specialists. This refusal of request by nurses may be considered as their indifference and resulted in violence.
Table B: Priority of predisposing factors of violence against nurses from nurses, patients and accompanies perspective

<table>
<thead>
<tr>
<th>Predisposing factors of violence</th>
<th>Nurses</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>coefficient</td>
<td>with violence</td>
<td>Priority</td>
<td>of factors</td>
<td>p value</td>
<td>coefficient</td>
<td>with violence</td>
<td>Priority</td>
<td>of factors</td>
<td>p value</td>
</tr>
<tr>
<td>Related to environment</td>
<td>0/729</td>
<td>2</td>
<td>* p&lt;0.005</td>
<td>0/621</td>
<td>5</td>
<td>* p&lt;0.005</td>
<td>0/630</td>
<td>6</td>
<td>* p&lt;0.005</td>
<td>0/005</td>
</tr>
<tr>
<td>related to management</td>
<td>0/664</td>
<td>5</td>
<td>* p&lt;0.005</td>
<td>0/581</td>
<td>6</td>
<td>* p&lt;0.005</td>
<td>0/706</td>
<td>4</td>
<td>* p&lt;0.005</td>
<td>0/005</td>
</tr>
<tr>
<td>Factors related to employee</td>
<td>0/717</td>
<td>3</td>
<td>* p&lt;0.005</td>
<td>0/799</td>
<td>2</td>
<td>* p&lt;0.005</td>
<td>0/714</td>
<td>3</td>
<td>* p&lt;0.005</td>
<td>0/005</td>
</tr>
<tr>
<td>Factors related to patient</td>
<td>0/573</td>
<td>6</td>
<td>* p&lt;0.005</td>
<td>0/818</td>
<td>1</td>
<td>* p&lt;0.005</td>
<td>0/702</td>
<td>5</td>
<td>* p&lt;0.005</td>
<td>0/005</td>
</tr>
<tr>
<td>Factors related to accompany</td>
<td>0/671</td>
<td>4</td>
<td>* p&lt;0.005</td>
<td>0/754</td>
<td>4</td>
<td>* p&lt;0.005</td>
<td>0/722</td>
<td>2</td>
<td>* p&lt;0.005</td>
<td>0/005</td>
</tr>
<tr>
<td>Factors related to time</td>
<td>0/775</td>
<td>1</td>
<td>* p&lt;0.005</td>
<td>0/797</td>
<td>3</td>
<td>* p&lt;0.005</td>
<td>0/743</td>
<td>1</td>
<td>* p&lt;0.005</td>
<td>0/005</td>
</tr>
</tbody>
</table>

*A level of P<0.05 was considered statistically significant*
Table C: comparison of nurses’, patients’ and accompanies perspectives related to the predisposing factors of violence against nurses based on pearson correlation test

<table>
<thead>
<tr>
<th>Comparison perspectives</th>
<th>Factors related to time</th>
<th>Factors related to patient</th>
<th>Factors related to employee</th>
<th>Factors related to management</th>
<th>Factors related to environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse and patient</td>
<td>r=0.213 p=0.001</td>
<td>r=0.671 p=0.001</td>
<td>r=0.598 p=0.001</td>
<td>r=0.356 p=0.001</td>
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<td>r=0.151 p=0.001</td>
</tr>
</tbody>
</table>

Among none of these three groups perspective in relation to the occurrence of violence against nurses no meaningful statistic relationship was found. But about environmental factors, a significant statistical relationship was found between nurses and patients views with (r=0.221) correlation coefficient. It is illustrated in table C.

**Conclusion:** The findings of the study revealed that violence in emergency department is prevalent and the most frequent kind of violence was verbal misbehavior like other studies, from nurses and accompanies perspective, small and overcrowded E.D. and from patients point of view, long waiting time were the most significant factors for violence. As being small and overcrowded E.D., is one of the most important factors for long waiting time, so according to the findings, responsible authorities in health system should consider some arrangements like increase the nurses and security guard number, training them about diagnosis the violent people
and making them calm, having appropriate waiting room to decline anxiety in patients and their relatives and restriction of visitors entrance in order to prevent, control and reduce incidence of violence against nurses and consequently make these three groups satisfied with health system and ultimately lead to improve the quality of health care. Further research is needed to identify best practices for preventing and mitigating ED violence.

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**References:**


