

# Prevalence of Work-Related Violence among Nurses Working in Kashan Shahid Beheshti Hospital in 2018

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## Abstract

**Background and Objectives:** Aggressive behaviors against medical personnel have been reported as a common problem that occurs in many ways and associated with many complications. The aim of this study was to describe the prevalence and work-related factors of workplace violent incidents against nurses in hospital environment. **Materials and Methods:** This descriptive, cross-sectional study was conducted on 161 nursing professionals working at Shahid Beheshti Hospital in Kashan. Data were collected using the Persian version of the standard questionnaire “Workplace violence in the health sector.” Descriptive analyses were conducted to examine the relationship of individual and work variables with the incidence of aggression. **Results:** Of the participants, 67% reported having been experienced at least one type of aggression within the past 12 months. The 1-year prevalence of verbal aggression (87%) was the highest, followed by physical aggression (31.2%). Nurses reported being pushed (13.6%) and beating (12.4%) as common physical aggression. Bullying (34.7%) and vilification (25.4%) were reported the most frequent verbal abuse. Perpetrators were mainly patients’ family (61.2%) and patients (30.2%). Married nurses were more likely exposed to physical and verbal violence compared to single nurses ( $P = 0.016$ ). The majority of nurses reported uselessness (62.8%) and unimportance (27.3%) of declaring violent events as the main reason for avoiding disclosure. **Conclusion:** The frequency of aggression, particularly verbal abuse is significantly high in nursing profession. The results suggest the need for the development of appropriate violent reporting and prevention systems in the hospital environment.

**Keywords:** Hospital, nurses, violence

## INTRODUCTION

Workplace aggression has become a worrying phenomenon worldwide. While violent incidents occur in all work environments, some jobs are more vulnerable to violence. Violence in the workplace is an important source of inequality, discrimination, and conflict in work units. In addition to preventing individual successes, this type of violence also prevents the society from progressing.<sup>[1]</sup> Work-related violence significantly affects all professional groups. Violence in the health sector accounts for roughly a quarter of all violence. Ambulance staff, nurses, and doctors of all health centers are in danger, especially in large cities where the crime rate is high.<sup>[2]</sup> Health workers are sixteen times more likely to

experience workplace violence.<sup>[3]</sup> Violence involves nonverbal threats (hand test and finger-pointing), verbal threats (screaming and violent voice), or physical invasion (pushing, kicking, and knife pulling).<sup>[4]</sup> Despite the fact that violence occurs in all work environments, health system staff are more exposed to workplace violence.<sup>[1-5]</sup> In the meantime, nursing is one of the

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most heavily exposed professions.<sup>[6]</sup> The most important factors of violence against nurses include being young, being male, low economic and social status, major psychiatric disorders, denial of treatment, personality disorders, having a criminal record, history of hospitalization due to invasion, history of violence in the family, the availability of weapons has been noted, and the main cases of violence have been observed in emergency care, psychiatry, and emergency departments.<sup>[7,8]</sup> Nurses are three times more likely to be exposed to violence than other healthcare staff, and female nurses are more vulnerable.<sup>[8]</sup> The results of a study by Celebioğlu *et al.* reported that violence against nurses varied from 37% to 72%.<sup>[9]</sup> A further study in Australia in 2012 found that 93% of workplace violence against nurses was practiced by patients.<sup>[10]</sup> The previous study determined that aggressive behaviors were strongly related to gender, job satisfaction, and work environmental factors among Swedish and British psychiatric nurses.<sup>[11]</sup> A study reported that 96% of nurses in the emergency wards of hospitals affiliated to Hamadan University were exposed to at least one type of violent behaviors.<sup>[12]</sup> A previous study by Esmailpour *et al.* (2011) was conducted on 186 nurses in emergency departments in Tehran. In this study, 91.6% of nurses had a history of facing with verbal violence and 19.7% of cases had experienced physical violence during the past year.<sup>[13]</sup> Patients' companions were the main source of violence in verbal violence (84.7%) and physical violence (14.3%). Physical violence was 14.3% and verbal violence was 19.6%. The most important factors that cause violence on the part of the patients include misunderstanding, the use of psychotropic drugs by patients, having a background of mental illness, the inadequate communication between staff and patients, anger, an emergency, and anxiety in patients.<sup>[14,15]</sup> There is a wide variation in the prevalence and types of violence in different hospital settings and nursing professionals. A detailed investigation of the prevalence, type, and risk factors is expected to improve our understanding of violence to provide appropriate preventive approach and occupational health services to hospital nurses.

The aim of this study was to determine the prevalence and types of aggressive behaviors among nurses in a university hospital. In addition, we examined the effects of individual and work-related risk factors on violence.

## MATERIALS AND METHODS

### Study design and sample

This is a cross-sectional, prevalence survey design. This research was conducted over a period of 11 months between May 2016 and April 2017. The study sample size was estimated by the following formula:

$$n = \frac{Nz^2 pq}{Nd^2 + z^2 pq}$$

Where,  $P = 0.5$ ,  $d = 0.05$ , and  $z = 1.96$  yielding a sample of 181 nurses.<sup>[10]</sup> The inclusion criteria for the study required that

nurses had a full-time job and at least 1 year of employment. Participation in the study was voluntary. Nurses were selected by quota sampling from different parts of the hospital, and nurses were randomly selected in each ward. Nurses who did not complete the questionnaire were excluded from the study. Of 181 nurses contacted, a total of 161 (88.95%) sets of valid data were received. Questionnaires were completed with the presence of project executives in the hospital.

### Study questionnaire and data collection

Study tools consisted of a demographic data form and a Persian version of the workplace violence questionnaire in the health sector. The original questionnaire based on the "Workplace Health Violence Questionnaire" adapted from the International Labor Office, the International Centre on Nurse Migration, and the International Council of Nurses.<sup>[16,17]</sup>

Demographic variables collected were age, marital status, sex, years of work as a nurse, education, and the number of hospital beds. The questionnaire consisted of 58 questions included two types of violence namely physical violence (15 questions) and verbal violence (24 questions) and demographic questions (19 questions). If respondents respond positively to the first question of each section (have you been verbally or physically abused), that person was considered as a case of violence, and the rest of the information on violence was examined in the questionnaire. The answer to each question included yes and no items.

The content validity of the questionnaire was verified by 10 Iranian faculty members who were hygienists. Prior studies in the Iranian hospital environment determined the reliability of the questionnaire. The Cronbach's of two types of violence ranged from 0.61 to 0.73, which indicated reliable.<sup>[18-20]</sup>

We received permission for conducting the research survey from the hospital management. Research team visited all hospital and the administrator of each nursing unit was asked to invite nurses to participate in the study. Research team distributed and explained the questionnaire to individual nurses and collected them in 5 days. Nurses were asked to remember if they had been exposed to any type of work-related violence within the previous last year.

### Ethical considerations

This research was approved by the ethics committee of Kashan University of Medical Sciences. Nurses participated in the questionnaire survey voluntarily. One of the authors informed nurses about the purpose of the study and asked them to complete an anonymous questionnaire distributed among participants. An informed consent was signed by the participant before completing the questionnaire.

### Statistical analyses

The data were analyzed using IBM SPSS 16 for windows (Microsoft, Chicago, IL, USA) software version 16. Descriptive univariate analyses were applied to describe individual and work characteristics, including age, marital status, gender, years worked as a nurse, work task, and

education level. Frequencies and means were calculated for the nurses who had exposed to violence and the perpetrators who had involved in aggressive behaviors were computed. The overall frequency of aggressive behavior was estimated as the proportion of participants who had been exposed to at least one type of violence within the previous 12 months. Subgroup Chi-square analyses of workplace violence were performed by age, marital status, gender, and years worked.  $P < 0.05$  was considered statistically significant.

## RESULTS

The demographic characteristics of the participants are shown in Table 1. Our study sample of 161 nurses had a majority of female nurses. Over two-thirds of nurses were married. The majority of nurses had full-time work. About two-third of the participants had worked 5 years or more in the nursing profession.

The frequency of aggressive behaviors is presented in Table 2 of the participants; 108 (67%) 67% of the nurses reported having been experienced at least one type of aggression within the last 12 months. Nurses exposed to being pushed (13.6%) as the most frequent type of physical violence, followed by beating (12.4). The frequency of verbal aggression and physical violence was 87% and 31.2%, respectively. More than 80% of nurses who experienced verbal aggression reported exposure to the violence “a few times.” The highest percentage of physical violence has been reported in the evening shift (44%), which may be due to the time of the patient’s visit to his or her relatives.

Table 3 shows the distribution of perpetrators involved in aggression behaviors in the hospital environment. Overall, most aggressive incidents were perpetrated by patients’ families, followed by patients, colleagues, managers, and staff. Families and nurse colleagues were frequent perpetrators of bullying. Meanwhile, around one-third of the incidents were occurred during patients’ meeting time with their beloved ones.

The occurrence of various types of aggression in terms of gender, marital status, years of employment, age, and education is presented in Table 4. Years of work in nursing profession and education level did not significantly associated with the risk of workplace aggression incidence. However, marital status was significantly associated with the occurrence of workplace aggression. Married nurses were more likely to experience physical and verbal violent incidents compared to single nurses ( $P < 0.05$ ). Male nurses were more likely to expose physical violence than female nurses ( $P < 0.05$ ). Moreover, nurses with 5 years or less working experience had more verbal abuse than those with more than 5 years ( $P < 0.05$ ).

Table 5 summarizes the reasons for underreporting workplace aggressive behaviors as perceived by hospital nurses. The majority of nurses pointed out to the uselessness and unimportance of declaring violent events.

**Table 1: Frequency of demographic characteristics of nurses of Shahid Beheshti Hospital in Kashan**

Variables	n (%)
Sex*	
Female	122 (75.8)
Male	39 (24.2)
Marital status*	
Single	36 (22.4)
Married	125 (77.6)
Education*	
BA	157 (97.5)
MA	4 (2.5)
Age (years)**	30.55±5.45
Years of employment*	
<5	47 (29.4)
>5	113 (70.6)

\*Data are presented as n (%), \*\*Data are presented as mean±SD. SD: Standard deviation

**Table 2: Frequency of (absolute and relative) physical and verbal violence in nurses of Shahid Beheshti Hospital in Kashan**

	n (%)
Physical violence	
Beating	20 (12.4)
Being pushed	22 (13.6)
Objects thrown at	9 (5.6)
Scratched with a sharp tool	12 (7.6)
Verbal violence	
Insulting	32 (19.8)
Vilification	41 (25.4)
Humiliated	16 (9.9)
Bullying	56 (34.7)
Threats	38 (23.6)

**Table 3: Distribution of perpetrators involved in aggression behaviors against hospital nurses**

Perpetrators	n (%)
Patients	42 (30.2)
Patients’ family	86 (61.9)
Nurse colleagues	4 (2.9)
Nurse’s manager	4 (2.9)
Staff	3 (2.2)
Total	139 (100)

Many nurses reported (describes nurses’ reactions to aggressive behaviors) that they asked offender for calm or keep silent without taking action. However, less than one-tenth of nurses reported violent events to managers, colleagues, and families.

From the nurses’ point of view, the reasons for the violence that were mentioned was the lack of awareness among people of our duties (60.4%), the low number of people in the department (41.5%), the lack of security facilities (29.6%),

**Table 4: Frequency of aggressive behaviors according to individual and occupational factors among hospital nurses**

Variables	Physical violence, n (%)		Verbal violence, n (%)	
	Yes	No	Yes	No
Marital status				
Married	36 (72)	88 (80)	105 (75)	20 (95.23)
Single	14 (28)	22 (20)	35 (25)	1 (4.77)
P	0.05		0.016	
Sex				
Male	26 (46.43)	18 (16.36)	37 (26.43)	2 (9.53)
Female	30 (53.57)	92 (83.64)	103 (73.57)	19 (90.47)
P	0.01		0.10	
Years of employment				
≤5	16 (32)	31 (28.19)	41 (29.28)	7 (33.33)
>5	34 (68)	79 (71.81)	99 (70.72)	14 (66.67)
P	0.62		0.04	
Age				
≤26	16 (32)	26 (26.63)	39 (27.85)	4 (19.04)
27-36	27 (54)	70 (63.63)	83 (59.28)	14 (66.67)
>37	7 (14)	14 (9.74)	18 (12.87)	3 (14.29)
P	0.55		0.18	
Educational level				
BA	48 (96)	108 (98.18)	136 (97.14)	21 (100)
MA	2 (4)	2 (1.82)	4 (2.86)	0
P	0.59		0.6	

**Table 5: Frequency of reporting aggressive behaviors violence as perceived by nurses**

Reasons for refusing to reveal violent behaviors	n (%)
Did not know where to report	5 (3.1)
Concerned about retaliation	4 (2.48)
No benefit in reporting complaints	101 (62.8)
Not important to declare	44 (27.3)
Felt too ashamed	5 (3.1)

the death of the patient (27.7%), the use of psychotropic drugs (18.9%), and prolonged stay in the department (15.7%). Of the 161 individuals, only 12 (7.5%) were trained in workplace violence.

In case of having a guard in the department, 47 (29.2%) were guardians and 114 (70.8%) had no guardians. Furthermore, about the establishment of police forces, 23 (14.3%) were deployed 24 h, 10 (6.2%) were settled only in the morning, and 127 (78.9%) were without police forces. In most cases, there was no intervention in the guards (52%) and police (66%).

## DISCUSSION

The present study was conducted to investigate the physical and verbal violence against nurses in a large hospital university in Kashan. The statistical analyses were performed on 161 nurses working in various hospital units at Shahid Beheshti Hospital. Overall, this study found that around

two-third of hospital nurses had experienced aggressive behaviors during working hours. The high prevalence of violence was in agreement with the results of similar studies by Fallah *et al.*,<sup>[18]</sup> Salimi *et al.*,<sup>[21]</sup> Rafati *et al.*,<sup>[22]</sup> and Hashemi-Dermaneh *et al.*<sup>[23]</sup> Workplace aggression, therefore, should be considered as a crucial occupational health problem. The impact of individual and work-related factors on the occurrence of violence may serve to develop prevention measures in the workplace.

However, the results of Camchochat *et al.*'s survey showed that the prevalence of verbal violence was 45.9% and physical violence was 6.4%.<sup>[15,24]</sup> The difference in the rate of violence in these studies can be due to the differences in culture and ethnicity. Jacobson *et al.* reported a degree of physical and verbal abuse of 97% and 74%, respectively.<sup>[15,25]</sup> The difference in the rate of violence caused by this study was that in the study of Jacobson *et al.*, a survey of violence against nurses took place at the very time of recruitment, but this study was only considered to be carried out in a 1-year period.

Our results suggested significant sex, marital, and years of work differences in risk of workplace aggression. In this study, the risk of physical violence increased for men compared to women. This result would be attributed to organizational climate in the hospital environment. This study also found the higher prevalence of violence among hospital nurses with 5 years or less experience. This finding is in agreement with the previous study that young and new employed nurses have been recognized to be at high risk for violence from nurse colleagues.<sup>[26]</sup> This highlights the importance of improving mutual relationship and respect among nurses.

Furthermore, in this study, more violence was observed in men and married nurses, which was consistent with a study of Mozaffari's study of types of violence against nursing personnel in Ilam Hospitals in 2012. Salimi *et al.*<sup>[21]</sup> reported that female nurses were at lower risk of physical violence than male nurses. Nursing is more popular and attracts the attention of women and fewer men participate in this profession. Therefore, it is likely that the patients refrain from using physical violence against a woman and express their anger and frustration as verbal violence.<sup>[27]</sup>

This study also found that patients' family and patients were the main perpetrators of various types of workplace aggression, which is confirmed in some previous studies.<sup>[28,29]</sup>

The physical attack and verbal abuse have also occurred more in the evening shift. In a study by Afkhamzadeh *et al.*,<sup>[19]</sup> violence in the evening shift and night shift is more than the shift in the morning, which is consistent with our study.<sup>[21]</sup> Furthermore, physical and verbal violators were mostly male, and in most cases companion of the patient, and the results of this study are also consistent with the study of Teymoorzadeh *et al.*<sup>[30]</sup> According to a study of Rafati *et al.*, most of the violence was reported by the patients' relatives.<sup>[22]</sup> Henderson concluded that the highest rates of violence against nursing

staff were patients and then companions. The reason for this difference lies in the fact that special security measures are taken in these countries for companions to meet the patients.<sup>[24]</sup> Our study indicated that nurses believed that reporting aggression incidence is useless and that the hospital managers were not decided to deal with the problem. Teymoorzadeh *et al.*'s study also found that in most cases, nurses did not report because of the sense of ineffectiveness. These results were consistent with the findings of this study. Probably, failure to report cases of violence, on one hand, is due to lack of proper feedback on the pursuit of violence in the organization and its reflection in the right way, and, on the other hand, the lack of clear and explicit instructions on such cases.<sup>[30]</sup>

In our study, the most common cause of violence was lack of awareness of nursing duties (61.4%), which shows that most people are not aware of nursing duties and have unreasonable and overwhelming expectations of nurses. The second leading cause of violence in this study was the low number of people in the department (41.5%), which is consistent with other studies.<sup>[24,31]</sup> The cause of violence in the study of Salimi *et al.* was the long waiting time in the emergency department, the high direct costs patients had to pay, the insufficient coverage of insurance, and the low number of emergency staff.<sup>[21]</sup> According to the study of Zamanzadeh and Abdollahzadeh, the absence of timely provision of security services, a low proportion of nurses to patients, and lack of training programs on violence prevention were reported as the most important factors predisposing to workplace violence.<sup>[32]</sup>

The reaction of nurses toward violence in most cases has been to invite the invader to calm down. In a study by Moraveji and Soleymannejad, the most common reported nurses' response to violence was to invite the invader to calm, nonaction, self-defense, and pretending that nothing had happened<sup>[24]</sup> which is similar to the results of this study. According to the findings of this study, physical violence toward married nurses was higher than single nurses. According to a study of Baby, violence against married nurses was more than single nurses, which is consistent with the present study.<sup>[11,33]</sup>

The results of our study showed that in most cases, the guards and the police did not intervene and did not perform properly. The lack of human resources and the lack of security facilities seem to be one of the most important causes of violence. In this regard, the results of the study by Zamanzadeh *et al.* showed that the most important preventive factors of violence were increasing the number of nurses, the timely availability of workforce, culture, and general education for nurses "knowledge and nurses" duties.<sup>[20]</sup>

The limitations of the study are as follows:

- Nonregistration of other violence, including sexual violence due to community culture
- The study was conducted in only one hospital
- Some nurses were reluctant to share their experiences with the research team
- We recommend more studies on these issues.

## CONCLUSION

The results of this study indicate that the level of violence against nurses is high and among them, the highest rate of violence is verbal and most of them are from the companions of the patients. Establishing an effective reporting system is crucial in managing violent behaviors. Nurses should also be encouraged to report violent events, and sufficient support needs to be provided after violent events. Due to the lack of interventional studies, future studies should move from descriptive to interventional to provide guidance for clinical use.

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## Conflicts of interest

There are no conflicts of interest.

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