Original Article

# Association between Nursing Care Quality and Amount of Violence against Nurses in Emergency Departments

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## Abstract

**Background:** Nursing care quality is among the most important criteria influencing patient satisfaction. Violence against nurses has been proposed as a global problem in health settings. Thus, we aimed to examine the association of nursing care quality with the amount of violence against nurses to provide authorities with information for planning the provision of higher-quality nursing care and reducing violence. **Materials and Methods:** This descriptive study analyzed descriptive and inferential statistics using demographic information, the Nursing Care Quality Questionnaire, and Workplace Violence in the Health Sector Questionnaire. Using the convenience sampling method, 120 nurses and 120 patients in emergency departments in 2022 were selected as the study participants. **Results:** The results showed that 56.70% of patients reported the nursing care quality level as "favorable," 40.80% as "somewhat favorable," and 2.50% as "unfavorable." The prevalence of nurses' exposure to verbal, physical, sexual, and racial violence was 96.70%, 50.00%, 12.50%, and 10.00%, respectively. The Mann–Whitney test showed a significant association between sexual violence and the physical dimension of nursing care quality ($P < 0.05$). However, nurses' and patients' demographic variables were not correlated with violence against nurses, and nursing care quality, respectively ($P > 0.05$). **Conclusions:** Nurses who had faced sexual violence had a lower nursing care quality score in the physical dimension including education, safety, and pain control. Therefore, it is suggested that the impact of nurse training in the above-mentioned fields on the frequency of violence against nurses be investigated.

**Keywords:** *Emergency medical services, nursing care, quality of health care, workplace violence*

## Introduction

Providing high-quality nursing care is considered a priority in healthcare systems, which can be measured from the perspectives of staff, patients, and their relatives.[1] Evaluating service provision in the Emergency Department (ED), the heart of hospitals indicates the general status of service provision in hospitals, which was reported as "somewhat favorable" by 80.28% and "favorable" by 19.72% of patients in Sanandaj, Iran.[2]

Workplace Violence (WPV), any type of physically or non-physically conscious and aggressive action or threat against staff at workplaces, is an increasingly global phenomenon among nurses compared to other medical staff,[3] which ranges from 76% in Greece to 67% in Italy.[4] In a study by Dehnabi *et al*.[5] in Sabzevar, Iran, nurses reported the prevalence of verbal, physical, racial, and sexual violence as 59.78%, 19.56%, 15.21%, and 5.43%, respectively. Violence in the EDs causes insecurity perception,[6] and physical and emotional problems in nurses, which leads to fatigue, burnout, and resignation.[4] In addition, some studies show that acts of violence against nurses can minimize nurses' cognitive ability and cause them to decrease the patient care time,[6] hand over the care of the patient to another nurse, or provide care without communicating with the patient.[7,8]

Considering the increasing number of patients due to the aging of the population,[2,7] the growing problem of violence against nurses in EDs and the need to reduce it,[5] the first step is to determine the prevalence of different types of violence.[9] Furthermore, it seems necessary to assess nursing care quality from patients' perspectives.[1,2] Some studies have provided data regarding the prevalence



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and causes of WPV from the nurse's perspective[3,9] or on nursing care quality from the patient's perspective.[1,2] However, no cross-sectional study has been conducted on the quality of nursing care from the perspective of patients and the prevalence of violence against nurses in the ED. Furthermore, considering the importance of these two concepts (nursing care quality and violence against nurses) to the health of patients and nurses,[6] it seems necessary to conduct a study on their association.

Therefore, we decided to investigate the association of quality of nursing care with the amount of violence against nurses to help authorities plan to establish a safer environment for the provision of high-quality care.

## Materials and Methods

This descriptive study was conducted on 120 working nurses and 120 patients hospitalized in the EDs of 4 hospitals for 2 months in 2022. The study participants were selected through the convenience sampling method. To obtain a power of 0.80, the minimum required sample size was 113 individuals at a 95% Confidence Interval (CI) and 10% attrition rate ($r$ = 0.3).[10] In this study, the inclusion criterion for nurses was having at least 1 year of work experience at EDs, and the criteria for patients included being 18–65 years of age, being hospitalized in EDs for at least 6 hours, and being conscious or having a companion to fill out the questionnaires. The data collection tools included a demographic information questionnaire, the Nursing Care Quality Questionnaire (NCQQ),[2] and Workplace Violence in the Health Sector Questionnaire (WPVHSQ).[5]

The first scale includes respondents' gender, marital status, age, work experience in EDs, and education level. The NCQQ, developed by Wandhelt and Acker, comprises 41 items scored on a 5-point Likert scale in three dimensions, including physical (18 questions), psychosocial (14 questions), and communication (9 questions). After calculating the mean score of NCQQ, nursing care quality was classified into three levels: "Unfavorable" (41–95.66), "somewhat favorable" (95.67–150.32), and "favorable" (150.33–205.00).[2] The WPVHSQ, designed by the International Labour Organization (ILO), contains 40 questions in four dimensions of violence, including verbal (10 questions), physical (13 questions), sexual (8 questions), and racial (9 questions).[3,5]

Both NCQQ and WPVHSQ have been validated in Iran and other countries.[2,5,11] Moreover, the content validity index (acceptable score ≥ 0.78)[10] for the NCQQ and WPVHSQ were measured by 10 nursing professors and experts and were reported to be 0.82 and 0.84, respectively. After the completion of the questionnaires by 30 patients and 30 nurses in EDs, Cronbach's alpha coefficient reliability (acceptable score ≥ 0.70[10]) for the NCQQ and WPVHSQ were 0.81 and 0.88, respectively.

For data collection, the first researcher went to the EDs of the selected hospitals, and questionnaires were completed by patients and nurses. To analyze the data, descriptive (frequency, proportion, mean, and standard deviation) and inferential parametric and non-parametric statistics (Kruskal–Wallis test, Chi-square test, analysis of variance [ANOVA], Mann–Whitney test, and independent $t$-test) were used after testing normality. The data were analyzed using the SPSS software (version 19A; SPSS Inc., Chicago, IL, USA).

### Ethical considerations

After receiving the code of ethics from the School of Nursing of Shahid Beheshti University of Medical Sciences (IR.SBMU.PHARMACY.REC.1399.199), the first researcher obtained the consent of the participants after providing explanations about voluntary participation and data confidentiality.

## Results

The results indicated that among the 120 participating nurses, 65.80% were women and 59.20% were married. Moreover, the mean (SD) age and work experience of nurses were 31.30 (6.70) and 6.80 (5.25) years, respectively. Most nurses (94.17%) had a bachelor's degree. Of the 120 participating patients, 56.67% were women and 70.80% were married, with a mean (SD) age of 45.45 (14.30) years. In addition, 27.50% of patients had a high school diploma [Table 1].

The majority of patients (56.70%) reported the total level of nursing care quality as "favorable," and 40.80% and 2.50% reported it as "somewhat favorable" and "unfavorable", respectively. Furthermore, among the patients participating in the study, 55.80% reported nursing care quality in the physical dimension as "favorable," 38.30% as "somewhat favorable," and 5.80% as "unfavorable" [Table 2]. Moreover, the total score of nursing care quality (SD) was 157 (31.49) and the mean (SD) of nursing care quality in the physical, psychosocial, and communication dimensions was 52.64 (12.40), 69.33 (13.45), and 35.02 (8.00), respectively.

The highest frequency of violence against nurses was of the verbal type (96.70%), followed by physical (50.00%), sexual (12.50%), and racial violence (10.00%) [Table 3]. The demographic variables of nurses and patients had no significant relationship with the frequency of violence and the quality of nursing care, respectively ($P$ > 0.05) [Table 1]. The Mann–Whitney test showed a statistically significant association between the physical dimension of nursing care quality and sexual violence against nurses (u = 110; $P$ < 0.05), whereas other types of violence against nurses, including verbal, sexual, and racial violence, were found to have no statistically significant association with the total nursing care quality ($P$ > 0.05) [Table 4].

**Table 1: Nurses' and patients' demographic variables and their relationship with violence frequency and nursing care quality**

| Demographic variable | Nurse *n* (%) | *p** | Patient *n* (%) | *p*** |
|---|---|---|---|---|
| Gender | | 0.06*** | | 0.42*** |
| Female | 79 (65.80) | | 68 (56.67) | |
| Male | 41 (34.20) | | 52 (43.33) | |
| Marital status | | ****0.81 | | 0.53**** |
| Married | 71 (59.20) | | 85 (70.80) | |
| Single | 46 (38.30) | | 19 (15.90) | |
| Widowed | 0 | | 13 (10.80) | |
| Divorced | 3 (2.50) | | 3 (2.50) | |
| Age (year) | | 0.43**** | | 0.63**** |
| 22–28 | 47 (39.17) | | 3 (2.50) | |
| 28.10–34 | 39 (32.50) | | 8 (6.67) | |
| 34.10–40 | 17 (14.17) | | 11 (9.17) | |
| 40.10–46 | 15 (12.50) | | 35 (29.17) | |
| 46.10–52 | 2 (1.67) | | 48 (40.00) | |
| 52.10–58 | 0 | | 8 (6.67) | |
| 58.10–64 | 0 | | 7 (5.83) | |
| Emergency department work experience (year) | | 0.06**** | | |
| 0–6 | 76 (63.00) | | | |
| 6.10–12 | 27 (22.50) | | | |
| 12.10–18 | 7 (5.83) | | | |
| 18.10–24 | 5 (4.17) | | | |
| 24.10–30 | 5 (4.17) | | | |
| Education level | | 0.38**** | | 0.58**** |
| Illiterate | 0 | | 28 (23.30) | |
| Pre-diploma | 0 | | 29 (24.20) | |
| Diploma | 0 | | 33 (27.50) | |
| Bachelor's degree | 113 (94.17) | | 30 (25.00) | |
| Master's degree | 7 (5.83) | | | |

*: Nurses' demographic variables and its relationship with violence frequency. **: Patients' demographic variables and its relationship with nursing care quality. ***: Independent *t*-test. ****: Analysis of variance

**Table 2: The frequency distribution of the level and dimensions of nursing care quality in emergency departments**

| Nursing care quality | Nursing care quality dimensions | | | |
|---|---|---|---|---|
| | Physical *n* (%) | Psychosocial *n* (%) | Communication *n* (%) | Total *n* (%) |
| Unfavorable | 7 (5.80) | 5 (4.20) | 5 (4.20) | 3 (2.50) |
| Somewhat favorable | 46 (38.30) | 48 (40.00) | 46 (38.30) | 49 (40.80) |
| Favorable | 67 (55.80) | 67 (55.80) | 69 (57.50) | 118 (56.70) |

## Discussion

The study findings demonstrated that nurses' demographic variables were not correlated to their exposure to violence, which is in agreement with the findings of Janatolmakan *et al*.,[9] indicating that nurses' characteristics including gender, marital status, and age were non-significant in their abuse exposure. Furthermore, a narrative review assessing eight Iranian and seven international articles showed that nurses' education level and work experience were not related to violence against nurses.[12] Perhaps this finding is due to the high percentage of female, young, and married nurses with low work experience and Bachelor's degrees in this study.

Moreover, the results showed no significant relationship between patients' demographic variables and the quality of nursing care. That is contradicted by the study by Karaca and Durna,[1] in which widowed and elderly female patients with a low level of education rated nursing care quality as high due to their low expectations. Another study indicated that Iranian patients, regardless of gender, marital status, age, and education level, expect nurses to visit them regularly, show them empathy and sympathy, and consider their opinions as human beings in setting up the care plan.[7]

The current results indicated that most patients reported the level of nursing care quality as "favorable" or "somewhat favorable." That is not in line with the findings of Fatehi

**Table 3: Frequency distribution of types of violence against nurses in emergency departments**

| Violence types | *n* (%) |
|---|---|
| Physical | 60 (50.00) |
| Verbal | 116 (96.70) |
| Sexual | 15 (12.50) |
| Racial | 12 (10.00) |

**Table 4: Association of various types of violence against nurses with the nursing care quality dimensions**

| Types of violence | Nursing care quality | *p* |
|---|---|---|
| Physical | Physical | 0.82* |
| | Psychosocial | 0.64* |
| | Communication | 0.30* |
| | Total nursing care quality | 0.64* |
| Verbal | Physical | 0.59** |
| | Psychosocial | 0.75** |
| | Communication | 0.27** |
| | Total nursing care quality | 0.55** |
| Sexual | Physical | 0.04*** |
| | Psychosocial | 0.42*** |
| | Communication | 0.10*** |
| | Total nursing care quality | 0.15*** |
| Racial | Physical | 0.06*** |
| | Psychosocial | 0.42*** |
| | Communication | 0.11*** |
| | Total nursing care quality | 0.13*** |

*: Independent *t*-test. **: Kruskal–Wallis. ***: Mann–Whitney

*et al*.,[2] who reported that although 98.20% of nurses rated the quality of nursing care as high, only 29.80% of patients were satisfied with the quality of nursing care. Recently, the decrease in the number of nurses in Iran has hurt the quality of care.[2,7,9] Moreover, the patients are not aware of the duties of the nurses, and because they spend most of their time with the nurses,[5,7] they also attribute the disadvantages of other services to nurses.[2] Using public media to educate patients about the nurses' duties, improving patient-centered care by applying modern managerial methods, and promoting staff training are among the most critical criteria for winning patients' approval and promoting hospital ratings.[1,2,5,8]

In the present study, the highest amount of violence against nurses was of the verbal type, and the next highest frequencies belonged to physical, sexual, and racial violence, respectively. These results are in line with another study that also reported the prevalence of verbal, physical, sexual, and racial violence as 78.79%, 32.15%, 8.61%, and 15.21%, respectively.[12] Because any violence begins with verbal violence, its frequency is higher than others. In a phenomenological study, Turkish nurses also stated that verbal violence in the form of cursing, threats, insults, and shouting was the most common violence against nurses that led to missed care, which caused more violence against nurses.[8]

In the present study, sexual abuse was in the third rank. However, in another Iranian study, the authors did not report sexual abuse.[9] This is probably because female nurses, who were the majority of the sample, did not report sexual violence, which is contradictory to the results of a Chinese study, where nurses reported sexual violence second only to verbal violence.[4]

Maybe this is because, in Iran, not only sexual violence but also statistics about other types of violence are not accurate due to the low reporting rate.[12] As a result, nurses must be trained in the field of reporting violence.[4,6] Moreover, an expert team should investigate the reports of violence in a standard way.[5,7] Immediate psychological support for nurses subjected to violence is also required.[4,7]

Considering the favorable level of nursing care quality in this study, a smaller amount of violence against nurses was expected. This indicates that violence against nurses may be affected by various factors[7,11] including patient's substance abuse, high healthcare costs, prolonged waiting time, lack of security facilities, and personnel's work-related stress.[5,9,12] Furthermore, 34.20% of the nurses in the current research were men, which is effective in increasing the prevalence of violence.[3,5,12]

The current findings only indicated a significant association between the physical dimension of nursing care quality and sexual violence against nurses. The physical dimension components are patient education, pain control, and safety.[2] Patients' unanswered questions regarding the disease, drug complications, and self-care,[1,8] patients' and their companions' physical and psychological suffering due to inadequate and delayed pain management, and patients' falls lead to dissatisfaction and violence.[8,12] Furthermore, in the study by Rooddehghan *et al*.,[7] the highest amount of missed nursing care belonged to the patient–nurse communication domain. Moreover, to decrease the prevalence of various types of violence, Rahimi *et al*.[11] in a quasi-experimental study performed an 8-h communication skills workshop as an in-service training for nurses. Esmaeili and Lameh-Jouybari[12] also recommended the inclusion of anger management classes for nursing students in the educational curriculum.

The limitation of the present study was that data on nurses' exposure to violence were collected retrospectively with self-report measures; so, there is a possibility of recall bias. Moreover, the reluctance of nurses to declare cases of violence, and fatigue of patients and nurses while completing the questionnaires may have affected the accuracy of the results.

## Conclusion

Verbal violence was the most common type of abuse against nurses. Despite the high-quality nursing care provided, there was a significant correlation between the physical dimension of nursing care quality and sexual violence.

Therefore, it is necessary to assess the effect of educational measures regarding different dimensions of the physical domain of nursing care on reducing the amount of violence against nurses. Moreover, due to the high prevalence of violence, it is recommended that measures such as adding communication and anger control courses to the curriculum and in-service training be taken to prevent violence against nurses. Furthermore, designing a system for reporting and investigating the reports of violence can help reduce this growing problem. Further studies with larger samples can more precisely determine the amount of violence against nurses and its related factors.

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## Conflicts of interest

Nothing to declare.

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