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# The relationship between workplace bullying and job stress among nurses working in emergency departments: a cross-sectional study

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## Abstract

**Introduction** Workplace bullying among nurses working in emergency departments is a serious issue that can significantly impact their job stress levels. One of the most important sources of stress in every person's life is their job. This study aimed to determine the relationship between workplace bullying and job stress among nurses in emergency departments.

**Methods** This cross-sectional study was conducted in the emergency departments of hospitals affiliated with Kurdistan University of Medical Sciences in 2023 in Iran. A total of 211 nurses were selected based on inclusion criteria using a census method. Data collection tools included a demographic information form, the Negative Acts Questionnaire for workplace bullying, and the Nursing Job Stress Questionnaire. Data were analyzed using descriptive and inferential statistics ( $P < 0.05$ ).

**Findings** The findings showed that the mean scores for job stress and workplace bullying in nurses were  $127.87 \pm 34.30$  and  $56.47 \pm 21.58$ , respectively, both at moderate levels. Furthermore, the results indicated a significant relationship between nurses' job stress in all dimensions and workplace bullying ( $P < 0.05$ ).

**Conclusion** Considering the average levels of bullying in the work environment and occupational stress of nurses and the existence of a significant statistical relationship between these two variables, the results of this research can help nursing managers to plan effectively to reduce bullying in the workplace and occupational stress of nurses.

**Clinical trial number** Not applicable.

**Keywords** Bullying, Occupational stress, Nurses, Emergency services, Hospital

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## Introduction

One of the most significant sources of stress in an individual's life is their job, so that the United Nations has referred to it as the disease of the 20th century. The World Health Organization (WHO) <sup>1</sup> has declared it a widespread problem. Job stress is an emotional, cognitive, behavioral, and psychological reaction to harmful aspects of work and the work environment. Generally, job stress can be considered a response to pressures from the work environment, occurring when expectations exceed an individual's authority and capabilities [1]. Emergency department nurses are in direct contact with patients, facing unpredictable situations, high-pressure, deficiencies in emergency control measures, and limited time frames for evaluating the effectiveness of interventions—factors that are considered stressors for these nurses [2]. Dagget et al. indicated that job stress in nurses was a common global issue, affecting between 9.2 and 68% of nurses [3].

In Iran, a study conducted in educational and therapeutic centers in Urmia estimated the prevalence of job stress among nurses between 47.80% and 69% [4]. Emergency nurses are at a high risk of experiencing workplace violence. It has a direct effect on general nurses' intention to leave. A high rate of nursing turnover may lead to staff shortage, jeopardize the quality of patient care and increase wait time for patients [5]. Episodes of physical and verbal violence, as well as psychological humiliation, are experienced daily by ED<sup>2</sup> staff. These incidents are increasing exponentially and can cause workplace disaffection contributing to severe burnout of ED healthcare personnel [6]. In addition to job-related stress, healthcare organizations and hospitals, which are constantly under high work pressure and in a state of change, are often sources of job stress, with workplace bullying being one of the contributing factors [7]. Bullying is defined as any deliberate, intentional, systematic, repetitive, negative, and abusive behavior exerted by one party in a relationship towards the other, causing both overt and covert harm to the targeted individual [8].

In many countries, the term “bullying” is synonymous with violence, disputes, harassment, mistreatment, and assault. Workplace bullying encompasses behaviors such as verbal abuse, threats, insults, humiliation, being ignored, intimidation, obstruction, and sabotage, or a combination of these behaviors. In the nursing profession, bullying can manifest in various ways by physicians or managers towards nurses, between nurses, from nurses towards patients, and from patients towards nurses. The prevalence of this phenomenon varies across countries due to differences in terminology, study

designs, cultural issues, the type of healthcare organizations (public or private), and attitudes towards this phenomenon [7]. Al-Muharraq et al. indicated that work-related bullying constituted the most common form of bullying, followed by personal bullying and physical intimidation [9]. Studies have shown that 17% of 6,000 nurses in the United Kingdom reported experiencing this phenomenon [10].

In the United States, 27.3% of emergency nurses reported workplace bullying incidents [11]. Imani et al. also showed that 96% of nurses had been bullied by patients during their careers [12]. Evidently, that bullying in clinical settings is a significant factor contributing to workplace stress, with adverse consequences [13], as it can jeopardize the health of both the nurse and the patient [14, 15].

According to the review of various studies in Iran and the world in the field of bullying in the workplace, it can be concluded that bullying in the workplace has happened in three dimensions, physical, Career and personal, especially in the emergency departments. Also, taking into account the semantic difference and cultural issues in relation to job stress in nurses, there is a void in a study in Iran that investigates and analyzes these two concepts with a descriptive and analytical approach and examines their relationship in the stressful and tense environment of the emergency department. In this context, the present study was conducted with the aim of determining the relationship between bullying in the workplace and occupational stress among nurses working in the emergency departments of teaching hospitals of Kurdistan University of Medical Sciences in 2023.

## Methods

In this cross-sectional study, 211 nurses working in the emergency departments of hospitals affiliated with Kurdistan University of Medical Sciences in the city of Sanandaj-Iran (Kowsar, Tohid, and Besat) were selected through a convenience sampling method from December 2023 to February 2024. Inclusion criteria included willingness to participate in the study, having at least six months of experience working in an emergency department, providing informed consent, and not having any confirmed psychiatric disorders. Exclusion criteria included failure to complete the questionnaire forms. The minimum sample size was based on the study by Abdulkavi et al. (2023) [16]. Additionally, according to the sample size calculation formula  $N = \left[ \frac{z_{\alpha} + z_{\beta}}{c} \right]^2 + 3$  and considering a correlation coefficient of 0.192, a Type I error of 0.05, a Type II error of 0.02, and a power of 80%, a sample size by considering a 10% chance of dropping the sample was obtained equal to 211.

<sup>1</sup> World Health Organization.

<sup>2</sup> Emergency Department.

Data was collected using three questionnaires: a demographic information form, a workplace bullying questionnaire, and a nursing job stress questionnaire.

The demographic information questionnaire included questions on the nurse's age, gender, marital status, education, clinical experience, experience in emergency departments, employment status, number of working hours per month, holding an organizational position, history of attending anger management courses, overtime hours, motivation for entering the profession, interest in working in the current department, obligation to work in the current department, type of shift, and the hospital where they worked.

To assess workplace bullying, the Negative Acts Questionnaire (NAQ) by Einarsen and Hoel, which includes 22 items covering three dimensions—work-related, personal, and physical—was used. This questionnaire is based on a 5-point Likert's scale ranging from “never,” “sometimes,” “monthly,” “weekly,” to “daily,” scoring from 1 to 5. A higher score indicates a greater exposure to workplace bullying, with scores ranging from 22 to 110. The validity of this questionnaire is 0.91 in a foreign sample and 0.95 in a domestic sample, confirming its reliability. The reliability of the questionnaire in Einarsen et al.'s study ranged from 0.83 to 0.96 [17]. Based on the results of Salimi et al. in Iran, NAQ-R with 22 items had three factors of work-related bullying, person-related bullying and job dismissal-related bullying, which their Cronbach's alpha coefficient, respectively, was 0.91, 0.83, and 0.85, and for the total NAQ-R was 0.94 [18].

To measure job stress among nurses, the Nursing Stress Scale (ENSS)<sup>3</sup> was used. This questionnaire, designed by Gray-Toft and Anderson in 1981 [19], contains 57 items across nine dimensions: seven items related to death and dying, five items related to conflict with physicians, three items related to inadequate emotional preparation, six items related to issues with colleagues, seven items related to problems with supervisors, nine items related to high workload, nine items related to uncertainty regarding treatment, eight items related to patients and their families, and three items related to discrimination. Each item is rated on a 5-point Likert scale from 0 to 4, including (0 - “This situation is not part of my duties,” 1 - “I do not feel stressed,” 2 - “I sometimes feel stressed,” 3 - “I often feel stressed,” 4 - “I am severely stressed”). Thus, scores range from 0 to 228, with higher scores indicating higher levels of nursing job stress. The interpretation of the scores is as follows: if the scores range from 0 to 56, the variable is at a low level; if the scores range from 57 to 170, the variable is at a moderate level; and if the scores range from 171 to 228, the variable is at a high level [20]. In the study by Aliyai Khachik et al. (2019), the reliability

and validity of the questionnaire were calculated as 0.84 and 0.96, respectively [21].

After the study protocol was approved by the Ethics Committee of Kurdistan University of Medical Sciences and receiving an ethics code (IR.MUK.REC.1402.156), the researcher visited the educational hospitals (Kowsar, Tohid, and Besat) in Sanandaj. The researcher visited the educational centers during three shifts—morning, afternoon, and night—to distribute the three questionnaires to eligible nurses after explaining the study's objectives. If any nurses were on leave, the researcher revisited the hospital to distribute the questionnaires. Given that one of the most important confounding variables in the present study could have been fear of managers or refusal to respond to bullying and stress questionnaires, in some cases the researchers tried to use electronic and anonymous questionnaires created by porsline.ir. In this way, nurses could answer the questionnaires without fear of managers and with a higher accuracy. Sampling continued until the estimated sample size was reached. To ensure ethical considerations, the researcher explained regarding the completion of the questionnaires, confidentiality of responses, and informed written consent forms to the emergency department nurses.

### Data analysis

Data analysis was performed using SPSS v.26. The normality of the data was evaluated using Kolmogorov-Smirnov test, also based on the Central Limit Theorem, with a sample size of 211 participants, the sampling distribution of the mean approximates normality. Therefore, the assumption of normality for parametric tests is reasonably justified. Additionally, the homogeneity of variances was tested using Levene's test, and the results indicated that the variances were equal across groups, satisfying the assumption of homogeneity necessary for valid interpretation of the parametric tests. Descriptive statistics were used to present quantitative variables as mean  $\pm$  SD, and qualitative variables with frequencies and percentages. To compare the means of quantitative variables across different levels of qualitative variables, independent t-tests was used. Pearson correlation tests were also conducted to assess the relationships between quantitative variables ( $P < 0.05$ ).

### Findings

In total, 211 nurses working in the emergency departments of educational hospitals in Sanandaj participated, with an average age of 33.10 years, ranging from 23 to 59 years. Among the participants, 53.1% were female, 91.5% held a bachelor's degree, and 62.1% were married. Most nurses (59.2%) had permanent employment status, and the majority (49.8%) were working at Kowsar Hospital. Additionally, 83.4% had rotating shifts, and most of them

<sup>3</sup>Expanded Nursing Stress Scale.

**Table 1** Mean and standard deviation of nursing job stress and the dimensions

Dimensions of job stress	Min	Max	Mean $\pm$ SD
Death and dying	6	26	16.23 $\pm$ 4.69
Conflict with physician	2	19	10.96 $\pm$ 3.71
Inadequate emotional readiness	1	12	6.26 $\pm$ 2.28
Challenges with colleagues	3	23	12.34 $\pm$ 4.28
Challenges with supervisor	5	27	16.01 $\pm$ 4.95
High workload	9	35	20.82 $\pm$ 6.13
Ambiguities about treatment	7	34	21.39 $\pm$ 5.83
Patient and the families	6	29	18.27 $\pm$ 5.24
Discrimination	0	12	5.54 $\pm$ 2.85
Total job stress	54	202	127.87 $\pm$ 34.30

**Table 2** Mean and SD of workplace bullying and the dimensions

Dimensions of bullying	Min	Max	Mean $\pm$ SD
Personal	7	48	19.59 $\pm$ 7.10
Work-related	12	56	29.64 $\pm$ 12.09
Physical	3	15	7.23 $\pm$ 3.72
Generally bullying at work	22	104	56.47 $\pm$ 21.58

(77.7%) held a nursing position. A significant proportion (83.9%) had not attended anger management courses, while 71.1% reported working in their current department without any pressure, and 65.4% expressed an interest in working in their current department. Furthermore, 40.8% of them reported being in the profession for other reasons. The average clinical experience in the hospital and emergency department was 8.68 and 4.68 years, respectively. The average number of working hours per month was 179.94, and the average number of overtime hours per month was 32.40.

The results in Table 1 indicate that the mean and SD of the total nursing job stress score was 127.87 (SD = 34.30). Among the dimensions of job stress, the dimension of "Ambiguities about treatment" had the highest mean score of 21.39 (SD = 5.83), while the dimension of "discrimination" had the lowest mean score of 5.54 (SD = 2.85). The mean and SD of other dimensions are reported in Table 1.

Table 2 lists the mean and SD of bullying score at work place in terms of its dimensions. Clearly, the highest mean score is obtained by work-related dimension equal to 26.64 (12.09).

The results in Table 3 indicate that 61.1% of nurses experienced moderate levels of job stress, while 38.9% experienced low levels. Since the frequency of severe stress levels was zero, it is not reported in the table. Additionally, the results from the independent t-test showed that the mean scores of the personal, work-related, and physical dimensions, as well as the overall score of workplace bullying, were significantly higher in individuals with moderate job stress compared to those with low job stress ( $P < 0.05$ ).

The results of Pearson's correlation test in Table 4 indicate a significant correlation between the various dimensions of job stress and workplace bullying ( $P < 0.05$ ). Specifically, the total score of job stress is correlated with work-related, personal, and physical bullying.

Additionally, the results showed that the overall score of workplace bullying is significantly correlated with the following dimensions of job stress: conflict with physicians, problems with colleagues, issues with supervisors, insufficient emotional readiness, high workload, ambiguity about treatment, patient and family issues, discrimination, and death and dying.

## Discussion

The relationship between workplace bullying and job stress in nurses working in the emergency departments of hospitals affiliated with Kurdistan University of Medical Sciences was examined. The level of workplace bullying in emergency nurses was moderate. Several studies have examined the extent of bullying among nurses, with contradictory results reported. For instance, Chowdhury et al. (2022) showed in their study, bullying was found to be considerably higher among the nurses of older age group, married, paid with higher monthly salary, government job holder [22]. Similarly, Mohamad Atiyeh et al. (2020) showed that most nurses experienced high levels of bullying, while over two-fifths experienced low levels of bullying [23]. Al-Muhriq et al. (2020) found the rate of workplace bullying was high [9]. While, Brewer et al. (2020) showed that only 31% of nurses who worked in hospitals were exposed to bullying [24]. A systematic review in Mexico reported the prevalence of workplace bullying among nursing workers equal to about 17–20% [25]. Also, the study of Awai et al. (2021). showed the

**Table 3** Comparison of mean and SD of workplace bullying dimensions based on job stress levels

Dimensions of bullying at work	Job stress levels		MD (95% CI for MD)	T-TEST	
	Moderate	Low		T	P-value
	Mean $\pm$ SD	Mean $\pm$ SD			
Personal	22.01 $\pm$ 6.42	15.79 $\pm$ 6.43	-6.22(-8.01, -4.43)	-6.851	0.0001
Work-related	34.09 $\pm$ 12.26	22.64 $\pm$ 7.77	-11.44(-14.43, -8.45)	-7.541	0.0001
Physical	8.37 $\pm$ 3.78	5.43 $\pm$ 2.83	-2.93(-3.89, -1.97)	-6.019	0.0001
Total bullying score	64.48 $\pm$ 21.16	43.87 $\pm$ 5.38	-20.60(-25.57, -15.62)	-7.623	0.0001

\*Independent t-test

**Table 4** Correlation between workplace bullying and job stress

Variable and dimensions	Bullying at work							
	Personal			Work-related	Physical		Total score	
	R**	P	R	P	R	P	R	P
Death and dying	0.370	0.0001	0.409	0.0001	0.390	0.0001	0.418	0.0001
Conflict with physician	0.537	0.0001	0.595	0.0001	0.532	0.0001	0.602	0.0001
Inadequate emotional readiness	0.479	0.0001	0.589	0.0001	0.501	0.0001	0.574	0.0001
Challenges with colleagues	0.482	0.0001	0.607	0.0001	0.523	0.0001	0.589	0.0001
Challenges with supervisor	0.562	0.0001	0.580	0.0001	0.442	0.0001	0.586	0.0001
High workload	0.479	0.0001	0.492	0.0001	0.423	0.0001	0.506	0.0001
Ambiguities about treatment	0.492	0.0001	0.486	0.0001	0.395	0.0001	0.502	0.0001
Patient and the families	0.476	0.0001	0.475	0.0001	0.417	0.0001	0.495	0.0001
Discrimination	0.437	0.0001	0.497	0.0001	0.406	0.0001	0.492	0.0001
Total job stress	0.560	0.0001	0.604	0.0001	0.514	0.0001	0.612	0.0001

\* Pearson's correlation test

\*\* Correlation Coefficient

prevalence of workplace bullying was 11.2%. Superiors or supervisors from other departments and colleagues were the main perpetrators [26]. The difference in the results of studies could be due to the organizational diversity in emergency departments in different countries. In Iran, due to administrative bureaucracies and direct supervision of managers over the performance of nurses, the possibility of organizational bullying is very high. However, in countries that use indirect supervision methods to evaluate the performance of emergency department nurses, the rate of bullying against nurses is much lower. Therefore, it is suggested that nursing managers, with greater knowledge of accreditation principles and health policies, take measures to reduce workplace bullying among nurses.

In addition, the level of job stress among nurses in the emergency department was moderate. Several studies have investigated this topic. For instance, Zakiye et al. (2022) assessed the stress levels of nurses during the COVID-19 <sup>4</sup>pandemic and found them to be moderate [27]. Additionally, An et al. (2022) demonstrated that the average scores of job stress in the nurses were not very high, higher levels of job stress and sleep disturbance still increased the likelihood of turnover intention [28]. This is while, Li et al. (2020) found that The job stress of nurses in China was high [29]. Alsu Kaushik et al. (2021) stated that The amount of job stress between tertiary nurses in INDIA was high [30].

The variation in study results may be due to the nature and function of emergency departments. In Iran, and in some cities where hospitals are not referral centers, patients are often transferred to other hospitals and referral cities, leading emergency nurses in these hospitals to experience lower levels of stress and tension. In contrast, the situation in referral hospitals is entirely different, with

nurses in these departments experiencing significantly higher stress levels. In the present study, only one of the hospitals had a referral emergency department, while the other two hospitals referred most of their patients elsewhere. This difference in stress levels could be attributed to the limited number of referral hospitals participating in the study.

The results also indicated a statistically significant relationship between job stress among nurses and the level of workplace bullying across all dimensions. This means that as the level of workplace bullying increases, the job stress experienced by nurses also rises. Al-Muhriq et al. (2020) found a positive and significant correlation between workplace bullying and the intention to leave among nurses, suggesting that higher levels of workplace bullying correspond to an increased likelihood of job turnover [9]. In another study, Kim et al. (2019) demonstrated that workplace bullying experienced by clinical nurses was associated with burnout, a factor that threatens the quality of nursing care and patient safety [31]. Similarly, Borzger et al. (2021) showed a significant correlation between overall job stress and its domains with burnout, indicating that higher job stress among nurses leads to increased burnout levels [2]. Yaghoubi and Arulapan (2023) also found a significant relationship between job stress, nursing job position, night shift duties, and job satisfaction [32]. Schultz et al. (2020) noted a connection between resilience, control over work, and social support, suggesting that higher resilience, greater control over work, and strong social support may help reduce exposure to job stress [33]. Although none of the reviewed studies directly addressed the relationship between job stress and workplace bullying, each study demonstrated a positive and significant connection between these variables in relation to others. The findings highlight the importance of examining the relationship between job stress among nurses and workplace bullying, particularly

<sup>4</sup>Coronavirus Disease 2019.



in the context of emergency departments. Unfortunately, the researchers could not find a comprehensive study considering the overall dimensions linking these two variables for comparison with the findings of the present study.

### Study limitation

The first limitation of the study was the overcrowded emergency room and, consequently, lack of enough concentration in the nurses to respond. This was controlled to some extent by visiting the nurses during quieter times (evening shifts and when patients had visitors).

The second limitation was the lack of cooperation and willingness of emergency department officials and personnel to participate in the study. To minimize these limitations, the researcher tried to provide sufficient information about study objectives and confidentiality of data. They also tried to answer the participants' questions and be present while the participants were completing the questionnaires.

### Conclusion

The results of this study showed that the level of bullying in the work environment among nurses working in emergency departments was at an average level, which is mostly in the work dimension, also the results showed the average level of occupational stress in these nurses, and in terms of the relationship between the variables, the results of a significant relationship between occupational stress and the level of bullying in the work environment were found. Therefore, it seems that it is very important to pay attention to the concepts of bullying in the workplace and occupational stress of nurses, that by implementing programs to reduce occupational stress and create an environment away from tension, the amount of bullying in the workplace can be reduced to a large extent, thereby improving the health and quality of care. Therefore, it is possible to take measures in the field of reducing occupational stress through the discovery of the amount and factors of bullying in the workplace with appropriate training plans. Therefore, it is suggested to conduct more studies in this field to find the causes and solutions to reduce bullying in the work environment, so that the level of occupational stress of nurses in the work environment can be reduced to a great extent.

### Abbreviations

WHO	World health organization
ED	Emergency department
NAQ	Negative acts questionnaire
ENSS	Nursing stress scale

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### Author contributions

All authors contributed to complete all of parts.

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### Data availability

Data is provided within the manuscript. In our article we just provided data availability within the manuscript. We state in the end part of manuscript.

### Declarations

All experiments were performed in accordance with relevant guidelines and regulations related to the Declaration of Helsinki.

### Ethics approval and informed consent to participate

The Institutional Review Board (IRB) at Kurdistan University of Medical Sciences has granted approval for this study. The IRB adheres to the provisions of the Helsinki Declaration. The Ethics Committee at Kurdistan University of Medical Sciences has also approved this study, and the ethical approval number (IR.MUK.REC.1402.156) has been obtained. This committee follows the ethical principles set forth in the Helsinki Declaration. We confirm that informed consent was obtained from all subjects and/or their legal guardians.

### Consent for publication

Not applicable.

### Competing interests

The authors declare no competing interests.

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