

*Original/Research Paper***The relationship between job burnout and organizational justice in Iranian nurses: A cross-sectional study**

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**Abstract**

This study was conducted to identify job burnout and its relationship with organizational justice among nurses employed in educational hospitals in Sari, Iran. The present cross-sectional study was conducted on 291 nurses employed in educational hospitals. The data collection tools included a questionnaire on demographic characteristics, organizational justice questionnaires by Niehoff and Moorman, and Maslach Burnout Inventory. A total of 262 nurses were included in this research. The mean of the total organizational justice score and the components of job burnout including emotional exhaustion, depersonalization, and personal accomplishment scores were 52.38 (SD=16.04), 36.64 (SD=11.05), 14.28 (SD=4.9), and 65.64 (SD=5.98), respectively. The results related to the level of organizational justice showed that the lowest mean score was obtained in the distributive justice dimension of organizational justice, while the highest mean score was obtained in the interactional justice dimension. The Pearson correlation coefficient indicated a negative and significant correlation between organizational justice and the number of overtime hours per month ( $r=-0.16$ ,  $P=0.012$ ). The results of the present study show that organizational justice has a significant effect on the occurrence of job burnout among nurses, and nursing service managers should adhere to justice and apply it in the organization to reduce job burnout and increase nurses' trust, commitment, satisfaction, motivation, and performance.

**Keywords:** Organizational Justice, Occupational Burnout, Nurses, Nursing, Iran.

**1 | Introduction**

With the increasing importance of competition, organizations are experiencing more challenging times today. The human factor is essential to the success of organizations. Several factors influence employee performance [1]. Skilled employees who seek respect challenge healthcare organizations [2]. Nurses are considered key employees in hospitals [3]. Nurses work independently and in

collaboration with other healthcare teams. Nursing is recognized as a stressful profession that can lead to physical and psychological consequences [4].

In recent years, nurses have shown more attention to organizational justice [2]. Organizational justice refers to perceptions of fairness or unfairness in resource allocation, decision-making, and interpersonal interactions [5]. The literature on organizational

justice is influenced mainly by Adam's equity theory (1965). According to this theory, individuals evaluate the fairness and justice of results, policies, and procedures. Employees compare their perceived rewards/allocation with the effort and rewards of other employees. If an individual perceives unfairness and unjust treatment in such a comparison, it creates disappointment and resentment in their mind, resulting in adverse behavioral and psychological reactions [2]. Greenberg (1987) introduced organizational justice in an organization [6]. Organizational justice is multi-dimensional. Distributive justice is the fair judgment of the organization's distribution of financial benefits and promotion opportunities. Procedural justice is the perception of employees about the fairness of the outcome allocation processes. Interactional justice refers to the observance of fairness in interpersonal interactions between managers and employees [7].

Nurses faced challenges with implementing the Health System Evolution Plan (HSEP) from the second half of May 2014 throughout the country [8]. Several positive and negative results have been reported on the satisfaction of nurses with implementing the HSEP [9]. In a study (2018) aimed at clarifying the experiences of nurses with the implementation of the HSEP, it was found that job burnout and fatigue among nurses increased after the plan's implementation, and the payment challenges of nurses were expressed as unfairness in comparison to physicians and other healthcare staff [10].

In a study (2017) aimed at evaluating the satisfaction of nurses with the HSEP, the lowest satisfaction of nurses was related to receiving salaries and benefits [11]. Considering the income gap in the HSEP and the dissatisfaction of nurses with unfairness [12] and discrimination in payments [13], this study was designed and conducted to investigate the organizational justice and related factors among nurses in educational medical centers affiliated with Mazandaran University of Medical Sciences (MAZUMS) after the implementation of the HSEP.

## **2 | Methods**

### **2.1 | Study design**

The present study was a cross-sectional study conducted in 2018. The research population consisted of all nurses in educational and therapeutic centers affiliated with MAZUMS.

### **2.2 | Ethics consideration**

The present study was approved by the Ethics Committee of MAZUMS (IR.MAZUMS.REC.1398.6445). A written introduction letter was obtained from MAZUMS to ensure ethical considerations. Nurses were included in the study after signing a

written informed consent form and were assured that their responses would remain confidential and all the questionnaires remains anonymous during data sampling.

### **2.3 | Sample size**

A sample size of 291 individuals was selected, with 15 to 20 samples considered for each independent variable. According to the statistics obtained from the Deputy of Treatment at MAZUMS, the number of employed nurses in affiliated teaching hospitals was 1300, of which 262 individuals were randomly selected using a systematic random sampling method. By visiting the nursing office in each hospital, a list of eligible nurses was obtained, and individuals were selected through systematic random sampling by adding 5 to 5 based on the random number table.

### **2.4 | Inclusion and exclusion criteria**

The inclusion criteria for this study included having a minimum of a bachelor's degree in nursing, having at least two years of work experience, no history of psychiatric illnesses in work records, no history of physical illnesses in work records, and no experience of stressful events in the past six months (such as divorce, death of a first-degree family member, termination from employment). The exclusion criterion for this study was the failure to respond to all questions of the questionnaire.

### **2.5 | Data collection**

After obtaining permission from the nursing managers, head nurses, and nursing supervisors, researchers visited the hospitals on different days to distribute the questionnaires and collected completed questionnaires at the end of the work shift. The selected individuals were contacted and provided with questionnaires to complete after explaining the purpose of the research and considering ethical considerations. The approximate time required to complete the questionnaire was 20 minutes, and data collection continued from November to December 2018.

The data collection tool consisted of personal and professional characteristics, which gathered information such as age, gender, education level, work experience, marital status, work shift, work department, type of employment, number of mandatory work hours per month, presence of overtime work, and average number of overtime hours per month. The standard Maslach Burnout Inventory (1981) [14] questionnaire was also used to assess job burnout. This questionnaire consists of 22 questions in three dimensions: personal disengagement (5 questions), emotional exhaustion (8 questions), and depersonalization (9 questions). The organizational justice standard questionnaire developed by Niehoff and Moorman (1993) assessed

organizational justice. The reliability of the overall questionnaire was 0.95, and the reliability of the subscales was also calculated [15]. The Persian version of the Maslach Burnout Inventory questionnaire was validated, and its psychometric properties were assessed by Akbari *et al.* (2011) [16], with a reliability score of 0.79 in this study. The reliability coefficients for organizational justice and burnout subscales were also calculated, ranging from 0.71 to 0.96.

The current questionnaire consists of three subscales: (a) distributive justice (5 items), (b) procedural justice (6 items), and (c) interactional justice (9 items), which together form the overall organizational justice scale. The questionnaire has a total of 20 items. Responses were scored on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with an option for neutral. The total score for the questionnaire ranges from 20 to 100. A score between 20 and 46 indicates low organizational justice, a score between 47 and 74 indicates moderate organizational justice and a score between 75 and 100 indicates high organizational justice [17].

The Persian version of Niehoff and Moorman's organizational justice questionnaire was translated and prepared by Naami & Shokrkon [18]. The questionnaire was validated, and its reliability was assessed in this study, with a reliability coefficient of 0.90 for procedural justice, 0.79 for distributive justice, and 0.96 for interactional justice.

## 2.6 | Statistical analysis

Data analysis was performed using SPSS software (version 16.0, SPSS Inc., Chicago, IL, USA). This study's main variables under investigation were job burnout and organizational justice. The independent variables in this study included gender, marital status, number of children, work experience, employment status, education level, position in the department, work shift, overtime work, workplace department, and having a second job. Descriptive statistics such as mean, standard deviation, percentage, and frequency were used to describe the independent variables. The Pearson correlation coefficient assessed the relationship between the two quantitative variables. Independent samples t-test was used for determining the relationship between organizational justice score and demographic variables with two categories, and one-way ANOVA was used for variables with three or more categories. The significance level was set at 0.05 for all tests.

## 3 | Results

### 3.1 | Personal and professional characteristics of nurses

A total of 262 nurses were included in this research. The results showed that the mean age of the participants was 30.37 (SD=6.89) years. The mean work experience of the participants was 12.53 (SD=0.6) years. The mean number of shifts worked was 26.64 (SD=3.93). The mean monthly working hours were 165.69 (SD=46.24). The personal and professional characteristics of the nurses studied are shown in Table 1.

**Table 1.** Personal and professional characteristics of nurses (N=262).

Variables	N (%)
<b>Gender</b>	
Female	215 (82.1)
Male	47 (17.9)
<b>Marital status</b>	
Single	52 (19.8)
Married	210 (80.2)
<b>Number of children</b>	
0	68 (26.0)
1	103 (39.3)
2 or more	91 (34.7)
<b>Employment Status</b>	
Official	120 (45.8)
A treaty	59 (22.5)
Contractual	20 (7.6)
Corporate	33 (12.6)
An extended plan	30 (11.5)
<b>Level of Education</b>	
Bachelor of Science in Nursing	236 (90.1)
Master of Science in Nursing	26 (9.9)
<b>Position in the department</b>	
Superintendent and deputy superintendent	37 (14.1)
Shift manager	90 (34.4)
Nurse	135 (51.5)
<b>Shift work</b>	
In circulation	219 (83.6)
Fixed	43 (16.4)
<b>Having overtime</b>	
Yes	238 (90.8)
No	24 (9.2)
<b>Workplace section</b>	
Internal	36 (16.2)
Surgery	31 (14.0)
ICU	49 (22.1)
Emergency	17 (7.7)
Oncology	19 (8.6)
Burn	14 (6.3)
Neonatal ICU	25 (11.3)
Children ICU	4 (1.8)
CCU	20 (9.0)
Dialysis	7 (3.2)
<b>Second job</b>	
Yes	13 (5)
No	249 (95)

### 3.2 | Organizational justice and job burnout in Iranian nurses

The mean of the total organizational justice score and the components of job burnout including emotional exhaustion, depersonalization, and personal accomplishment scores were 52.38 (SD=16.04), 36.64 (SD=11.05), 14.28 (SD=4.9), and 65.64 (SD=5.98), respectively. The results related to the level of organizational justice showed that the lowest mean score was obtained in the distributive justice dimension of organizational justice, while the highest mean score was obtained in the interactional justice dimension (Table 2).

**Table 2.** Organizational justice and job burnout in Iranian nurses (N=262).

Questionnaires	Mean (SD)	Minimum-Maximum
<b>Organizational Justice</b>	52.38 (SD=16.04)	20-99
Distributive	11.02 (SD=3.59)	5-24
Procedural	16.13 (SD=5.64)	6-30
Interactive	25.23 (SD=8.74)	9-45
<b>Job Burnout</b>		
Emotional exhaustion	36.64 (SD=11.05)	9-62
Disfigurement	14.28 (SD=4.9)	5-30
Personal performance	65.64 (SD=5.98)	17-62

### 3.3 | The mean and standard deviation of organizational justice based on personal and professional characteristics of nurses

In this study, the level of organizational justice and its related factors were examined from the perspective of nurses, and the results are presented in Table 3. According to the results reported in Table 3, variables such as education level and workplace department significantly affected organizational justice. The mean organizational justice score for individuals with a bachelor's degree was about 10 points higher than those with a master's degree. In addition, pairwise comparisons (using the Bonferroni test) were performed for the workplace department variable, and the results showed significant differences between (ICU-burnout), (Emergency-ICU Pediatrics), (Oncology-burnout), (burnout-ICU), (burnout-CCU), (ICU Pediatrics-Oncology), (Oncology-ICU Pediatrics), (ICU Pediatrics-Neonatal ICU), (ICU Pediatrics-CCU), and (CCU-Dialysis).

### 3.4 | Pearson correlation between organizational justice and personal and professional characteristics of nurses

Based on the results reported in Table 4, the Pearson correlation coefficient between the number of overtime hours and organizational justice was found to be 0.16, indicating a negative

correlation between overtime hours and organizational justice. In other words, as overtime hours increase, organizational justice decreases, and vice versa. However, there was no significant correlation between organizational justice and the other variables.

**Table 3.** The mean and standard deviation of organizational justice based on personal and professional characteristics of nurses (N=262).

Variables	Organizational Justice	
	Mean (SD)	P-value
<b>Gender</b>		
Female	51.59 (SD=16.37)	0.086 <sup>a</sup>
Male	56.02 (SD=14.03)	
<b>Marital status</b>		
Single	53.60 (SD=18.39)	0.544 <sup>a</sup>
Married	52.09 (SD=15.44)	
<b>Number of children</b>		
0	54.87 (SD=18.54)	0.273 <sup>b</sup>
1	50.83 (SD=15.98)	
2 or more	52.30 (SD=13.91)	
<b>Employment Status</b>		
Official	50.18 (SD=15.41)	0.172 <sup>b</sup>
A treaty	52.98 (SD=14.54)	
Contractual	55.30 (SD=18.06)	
Corporate	52.67 (SD=14.42)	
An extended plan	57.77 (SD=20.48)	
<b>Level of Education</b>		
Bachelor of Science in Nursing	53.41 (SD=16.13)	0.002 <sup>a</sup>
Master of Science in Nursing	43.11 (SD=11.86)	
<b>Position in the department</b>		
Superintendent and deputy superintendent	53.21 (SD=16.03)	0.942 <sup>b</sup>
Shift manager	52.34 (SD=15.75)	
Nurse	52.18 (SD=16.34)	
<b>Shift work</b>		
In circulation	52.16 (SD=16.51)	0.601 <sup>a</sup>
Fixed	53.56 (SD=13.54)	
<b>Having overtime</b>		
Yes	52.55 (SD=15.97)	0.592 <sup>a</sup>
No	50.71 (SD=17.02)	
<b>Workplace section</b>		
Internal	56.20 (SD=16.26)	<0.0001 <sup>b</sup>
Surgery	56.10 (SD=16.64)	
ICU	48.33 (SD=14.73)	
Emergency	48.35 (SD=15.31)	
Oncology	45.05 (SD=13.56)	
Burn	65.64 (SD=11.91)	
Neonatal ICU	48.76 (SD=14.61)	
Children ICU	81.25 (SD=8.88)	
CCU	47.70 (SD=14.95)	
Dialysis	44.00 (SD=12.82)	

<sup>a</sup> Two-independent t-test

<sup>b</sup> One-way ANOVA

### 3.5 | Simultaneous effect of personal and professional variables on organizational justice using the Backward method

Furthermore, the results showed that in examining the simultaneous effect of all demographic variables on organizational justice

using the Backward method, the regression coefficient for gender was 6.30, indicating that, on average, the organizational justice score for men was 6.30 units higher than that for women. The regression coefficient for the education level of a master's degree was -9.47, indicating that, on average, the organizational justice score for individuals with a master's degree was 9.47 units lower than those with a bachelor's or associate degree. Regarding the workplace department variable, each department was compared to the internal department, with a regression coefficient of -7.97 for the ICU department, indicating that, on average, the organizational justice score for employees in the ICU department was about eight units lower than that in the internal department. The remaining departments were also interpreted in the same way. Additionally, the variable of overtime hours had a regression coefficient of -0.10, indicating that with an increase of one overtime hour, the mean organizational justice score decreased by 0.10 units (Table 5).

**Table 4.** Pearson correlation between organizational justice and personal and professional characteristics of nurses.

Variables	Correlation Coefficient	P-value
Age	-0.1	0.125
Work experience	-0.12	0.064
Mandatory working hours per month	-0.004	0.95
The number of overtime hours per month	-0.16	0.012

**Table 5.** Simultaneous effect of personal and professional variables on organizational justice using the backward method.

Variables	Correlation Coefficient	Standard Error	P-value
<b>Gender</b>			
Man	6.3	2.69	0.02
<b>Level of Education</b>			
Master of Science in Nursing	-9.47	3.5	0.007
<b>Workplace section</b>			
Internal			
Surgery	-0.62	3.89	0.873
ICU	-7.97	3.46	0.022
Emergency	-9.07	4.45	0.043
Oncology	-12.84	4.41	0.004
Burn	5.59	4.91	0.256
Neonatal ICU	-6.76	4.06	0.097
Children's ICU	21.26	7.89	0.007
CCU	-8.26	4.33	0.058
Dialysis	-13.39	6.1	0.029
<b>Overtime hours</b>	-0.1	0.04	0.016

### 3.6 | Pearson correlation between the total score of organizational justice and its components with the total score of job burnout and its components

Based on the results reported in Table 6, the correlation coefficient between the distributive component and emotional

exhaustion was -0.35, indicating a significant and negative correlation between these two components. In other words, emotional exhaustion decreases as the distributive component increases, and vice versa. The correlation coefficient between the distributive component and job burnout was also -0.28, indicating a negative correlation between these two variables.

**Table 6.** Pearson correlation between the total score of organizational justice and its components with the total score of job burnout and its components (N=262).

Variables	Emotional exhaustion	Disfigurement	Personal performance
<b>Distributive</b>			
Correlation Coefficient	-0.35	-0.12	0.02
P-value	<0.0001	0.058	0.794
<b>Procedural</b>			
Correlation Coefficient	-0.24	0.08	-0.03
P-value	<0.0001	0.178	0.658
<b>Interactive</b>			
Correlation Coefficient	-0.34	-0.19	-0.05
P-value	<0.0001	<0.0001	0.451
<b>Organizational justice (total score)</b>			
Correlation Coefficient	-0.35	-0.16	-0.03
P-value	<0.0001	0.011	0.612

On the other hand, the correlation coefficient between the procedural component and emotional exhaustion was -0.24, indicating a significant and negative correlation between these two components. In other words, emotional exhaustion decreases as the procedural component increases, and vice versa. The correlation coefficient between the procedural component and job burnout was also -0.21, indicating a negative correlation between these two variables.

The correlation coefficient between the interactive component and emotional exhaustion was -0.34, indicating a significant and negative correlation between these two components. In other words, emotional exhaustion decreases as the interactive component increases, and vice versa. The correlation coefficient between the interactive component and depersonalization was also -0.19, indicating a negative correlation between these two variables. On the other hand, the correlation coefficient between the interactive component and overall job burnout score was -0.32, indicating a significant and negative correlation between these two variables.

Furthermore, the correlation coefficients between the organizational justice score and the job burnout components were calculated. The results showed that except for personal accomplishment, all other components had a significant negative correlation with organizational justice (P<0.05). The correlation coefficient

between organizational justice and emotional exhaustion was -0.35, indicating a negative correlation between these two variables. The correlation coefficient between organizational justice and depersonalization was -0.16, and the correlation coefficient between organizational justice and overall job burnout score was -0.31, indicating a negative correlation between organizational justice and job burnout. In other words, as organizational justice increases, job burnout decreases.

## **4 | Discussion**

The study aimed to determine job burnout and organizational justice and the related factors among nurses working in the MAZUMS educational and medical centers. The results showed that the exhaustion component of job burnout was higher among head nurses compared to other nurses, as was the depersonalization component and the personal accomplishment component was lower. This finding is consistent with Luan et al. (2017), who found differences in job burnout components between head nurses and other nurses [19]. According to Nabizadeh-Gharghozar et al. (2020), job burnout is a condition that involves physical, emotional, and social exhaustion caused by uncontrolled job stress and insufficient managerial and social support [20]. One of the factors contributing to job burnout among head nurses compared to other nurses is the lack of managerial support. Ali et al. (2018) found that empowering head nurses through educational programs can reduce nurse burnout in Egypt [21]. In this study, there was no significant difference in the mean job burnout components based on educational level, as determined by the analysis of the variance test. However, Rafiei et al. (2019) found a significant association between educational level and job burnout [22]. Another study found no significant difference in job burnout components between nurses with and without overtime or a second job. In a study by Moshtagh Eshgh et al. (2014), there was a significant difference in job burnout components based on education level but not on having a second job, age, or work experience. The current study showed no significant difference in job burnout levels based on gender [23]. However, Khodabakhshi et al. (2016) found that job burnout was higher in women [24]. Jafari Iraqi et al. (2016) found that the personal accomplishment component of job burnout was the highest among nurses [25]. Similarly, Davoudi-Kiakalayeh et al. (2015) found that nurses had higher levels of job burnout in the personal accomplishment component compared to other components [26]. In other studies, the personal accomplishment component was found to have the highest intensity in the job burnout components of nurses. Inadequacy in personal performance indicates a lack of job motivation

and low self-esteem, which can lead to a loss of professional competence and success in job tasks [27].

The results of the present study indicate a significant negative correlation between the overall job burnout and emotional exhaustion components with the dimensions of organizational justice. The emotional exhaustion component had a negative and significant correlation with all dimensions of organizational justice, while the depersonalization component had no significant correlation with interactive justice, and the individual accomplishment component had no significant correlation with organizational justice dimensions. Some studies have reported findings consistent with the present study. In the study by Alimoradnori et al. (2018), emotional exhaustion had a significant negative correlation with distributive justice and procedural justice, and distributive justice had a significant negative correlation with personal accomplishment [28]. The study by Rohollahi et al. (2016) showed that organizational justice predicts 24% of job burnout in military airport employees [29]. Negahban et al. (2017) found that organizational justice predicts 39.3% of nurses' job satisfaction [30]. Organizational justice reflects employees' perceptions of managers' decisions, behaviors, and organizational performance. Lack of organizational justice leads to work stress, interpersonal conflicts, and reduced group interactions. Fair distribution of financial rewards and benefits affects employees' performance [31]. Therefore, conditions should be provided to increase the dimensions of justice in the organization so that positive and negative aspects in healthcare centers can be distributed fairly. In favorable organizational conditions, nurses become more committed. Fair distribution of resources and benefits and respectful communication with nurses improve nurses' perception of organizational justice and decrease job burnout [32, 33].

### **4.1 | Limitations**

The main limitation of this study was the self-expression of the research samples.

### **4.2 | Implications for nursing managers and policy-makers**

Paying attention to the mental conditions of nurses, creating motivation, financial incentives and providing career advancement paths, correct appointments in the organization are effective in creating organizational justice and reducing job burnout of nurses.

### **4.3 | Recommendations for future research**

It is suggested to conduct qualitative research in the field of nurses' organizational justice and methods of reducing job burnout.

## 5 | Conclusions

The results of this study indicate that emotional exhaustion and job burnout can arise from deficiencies in establishing organizational justice. Moreover, the correlation between depersonalization and organizational justice, overall and interactive dimensions, highlights the importance of managers' fair treatment of employees in interpersonal interactions. The findings of this study emphasize the importance of paying attention to organizational justice and its dimensions by managers in the healthcare system. It is hoped that by providing training courses for managers, effective steps can be taken to promote organizational justice and reduce nurses' job burnout.

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### Authors' contributions

Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work: ZM, HAL, SNM, TY, SM; Drafting the work or revising it critically for important intellectual content: ZM, HAL, SNM, TY, SM; Final approval of the version to be published: ZM, HAL, SNM, TY, SM; Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved: ZM, HAL, SNM, TY, SM.

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### Ethics approval and consent to participate

The present study was approved by the Ethics Committee of MAZUMS (IR.MAZUMS.REC.1398.6445). A written introduction letter was obtained from MAZUMS to ensure ethical considerations. Nurses were included in the study after signing a written informed consent form and were assured that their responses would remain confidential and all the questionnaires remains anonymous during data sampling.

### Competing interests

We do not have potential conflicts of interest with respect to the research, authorship, and publication of this article.

### Availability of data and materials

The datasets used during the current study are available from the corresponding author on request.

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