

## Original Article

**Investigating the Relationship between Emotional Intelligence and Social Support with Burnout in Nurses in Intensive Care Units**Sadegh Safa'i Kochaksaraei<sup>1</sup> Mohammad Ali Heidari Gorgji<sup>2</sup> Tahere Yaghoobi<sup>3</sup>  
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(Received: 27 Mar. 2020; Revised: 13 Aug. 2020; Accepted: 20 Sep. 2020)

**Abstract**

**Background and Purpose:** Since job burnout affects the patients' quality of care, it is useful to identify more effective factors in improving the quality of services. The aim of this study was to investigate the relationship between emotional intelligence and social support with job burnout among nurses.

**Materials and Methods:** This was a descriptive and cross-sectional study conducted in the winter of 2018. The research population included 214 nurses of intensive care units in medical and educational center of Mazandaran University of Medical Sciences by census sampling method. Data were gathered using Bradbury and Graves' social intelligence, Philips et al.'s social support and Maslach and Jackson's burnout questionnaires. For analyzing the research hypotheses, Pearson correlation, linear regression, and Sobel test were used.

**Results:** Two of the nurses exhibited low emotional intelligence (%0.93), while two of them had average (%0.93) and 210 had high emotional intelligence (%98.13). 18.22% had low burnout, 73.36% had average and 8.41% had high burnout rate. The correlation between emotional intelligence with social support was 0.125, and probability was greater than 0.05. The correlation between emotional exhaustion and perceived social support, personality deprivation, individual performance, and job burnout were found to be 0.012, 0.07, -0.045, and 0.015, respectively; whereas probability values for all of these relationships were more than 0.05. The correlation between emotional intelligence and emotional exhaustion, personality deprivation, individual function, and burnout were -0.263, -0.125, -0.313, and -0.335, respectively. The probability values except the person's depersonalization variable, for other relationships were also less than 0.05, and the relationship was documented to be significant.

**Conclusion:** There was a significant and inverse relationship between emotional intelligence and job burnout, but there was found not a significant relationship between social support with job burnout, and emotional intelligence with social support.

**Key words:** Emotional Intelligence; Social Support, Job Burnout; Nurses, Intensive Care Units

**Citation:** Safa'i Kochaksaraei S, Heidari Gorgji MA, Yaghoobi T, Yazdani J, **Jafari H\***. Investigating the Relationship between Emotional Intelligence and Social Support with Burnout in Nurses in Intensive Care Units. Iran. 2017-2018). Iran J Health Sci. 2020; 8(4): 37-49.

## 1. Introduction

Job burnout is one of the occupational hazards that has been considered in recent years (1), and it is a psychological state that results from high levels of long-term stress in occupational life (2). Occupational burnout is the psychological syndrome including emotional exhaustion, depersonalization, and loss of personal performance (3). Exhaustion is a physical and psychological syndrome with fatigue that leads to negative attitudes towards oneself, work and caregivers, non-productive labor and absence from work, low ethics, and job dissatisfaction (4). The results of Weinberg and Creed research showed that nurses are more likely to become burnout than people in other occupations (5). Considering job burnout in service organizations like health department is very important. Because of direct relationship with human health, this section is one of the most important areas of sustainable development in human societies. In Esfandyari research, it was mentioned that in all hospitals, we can see the nurses who are orderly, compassionate, and caring, but after working for several years and facing a lot of problems and job stress in the workplace, they feel tired and even want to quit their job (6). The results of burnout in nurses is related to self-morbidity, physical complaints, anxiety and sleep problems, social dysfunctions, and nurses' depression (7). Felton considered burnout to be an occupational disease that should be diagnosed and treated in nurses (8).

Job burnout reduces the quality of services provided to patients and, consequently, leads to dissatisfaction with medical services, so recognizing and preventing burnout will play a significant role in patient satisfaction (9). Identifying more

effective factors will also be helpful in raising the quality of the offered services (10). One of the factors affecting job burnout is emotional intelligence that has a significant contribution to success in life and work (11). The proper use of excitement in human relationships is self-understanding of others, self-consciousness, empathy with others, and the positive use of excitement in thinking and cognition (12). Findings from different studies in Australia, China, the United States, and Iran showed that there has been an inverse relationship between emotional intelligence and job burnout, and emotional intelligence components predicted each dimension of burnout (13-17). However, in his study on nurses, Budnik pointed out that components of burnout are important in predicting the emotional intelligence of nursing staff (18). But Froese's research findings among 57 healthcare providers showed that emotional intelligence cannot be decisive in predicting personal performance (19).

It should be mentioned that supportive occupational environments comprise the most important factor in creating job satisfaction for nurses, and the enjoyment of social support in the nurses affects the treatment of patients, job satisfaction, and results in the reduction of job stress, as well as staffing and maintenance in the organization (20). Perceived social support is a combination of three elements of affection, affirmation, and help. Affection means expressing love and tenderness; Affirmation means awareness of appropriate behaviors; and help is direct assistance, such as financial assistance and assistance in doing things. Besides being able to support patients, nurses also need support systems (21). In terms of job

burnout, social security seems to be worth anything. The support observed by colleagues in the workplace and other supervisors has a strong and positive effect on occupational stress (20). The results of the study showed that nurses who received less support from their colleagues experienced more job stress and were more likely to suffer burnout (22). Other study results showed that perceived social support was recognized as an important factor in the life of individuals in organizations, and it reduced the burnout of individuals in organizations and institutions (23). The results of a study on 477 nurses working in mental health sectors showed that perceived social support is the best way to deal with burnout (20). The most important effect of perceived social support when faced with stress, regardless of its levels, is to improve the health status (24). As indicated in the above-mentioned research, improved perceived social support among nurses can be a suitable solution to reduce the job burnout.

Nurses are at high risk of burnout due to their heavy occupational responsibilities. Nurses in intensive care units, because of their job, have much more pressure, because they work with patients who have unsteady vital signs, like people with apoplexy or accident. Frequent working with patients in a long term causes burnout, but less attention has so far been paid to this subject, and few studies have focused on it. Also, working environment coupled with support are the most important factors for job satisfaction for nurses. The perceived social support and the level of emotional intelligence affect the treatment of patients, nurses' job satisfaction, their staffing, and maintenance. Therefore, considering the importance of burnout in healthcare workers, and the relationship between job

burnout with emotional intelligence and perceived social support, the purpose of this study was to determine the relationship between emotional intelligence and social support with job burnout in nurses of intensive care units of medical and educational centers of Mazandaran University of Medical Sciences.

## 2. Material and Methods

This descriptive-analytic research was a correlation type. All nurses of special departments of educational centers of Mazandaran University of Medical Sciences in the winter of 2018 were selected from 5 centers as 1. Bu Ali, Sari (24 person), 2. Emam Khomeini, Sari (66 person), 3. Shahid Zare, Sari (30 person), 4. Fatemeh Zahra, Sari (42 person), 5. Razi, Qaemshahr (52 person) comprising a total of 214 persons. Sampling method was census. Inclusion Criteria were as follows: 1. Being specialist nurse; 2. having at least 2 years of work experience; 3. not having psychological disorders; and 3. not having severe physical illnesses. The exclusion criteria was also determined to be failure to answer all questionnaire questions (22). The main instrument of this study was a questionnaire for collecting the required data. Three questionnaires were used: 1. Bradbury and Graves' Intelligence Inventory, 2. Philips Social Support Questionnaire, and 3. Maslach & Jackson Burnout Questionnaire.

Validity and reliability of Bradbury and Graves' Emotional Intelligence Questionnaire was measured by Bradbury in Iran with a coefficient level above 0.85 (25). The questionnaire consists of 28 items rated on a five-point Likert scale (1 = never and 5=always). The questionnaire measures four components of self-awareness (items 1 to 5), self-management (items 6-15), social

awareness (items 16 to 20), and relationship management (items 21 to 28), and it also gives an overall score to emotional intelligence. The cut point of the test used is that the score above 80 indicates high emotional intelligence and a score lower than 60 indicates low emotional intelligence (25).

The Social Support Questionnaire of Philips et al. (1986) also includes three dimensions: 1. Family's support, 2. Friends' support, 3. Others' support. Family support dimension also includes 7 components (items 1-7), friends' support consists of 8 components (items 8 to 15), and others' support consists of 8 components (items 16 to 23) (26, 27). In Sarmad's research, in order to measure the reliability of each dimension of this questionnaire, the Cronbach's alpha method was used. Based on the results, for each of the components of the questionnaire, including Family support, Friends' Support of, and Others' Support, Cronbach Alpha was found to be 0.78, 0.82 and 0.76, respectively (27).

The Maslach & Jackson Burnout Questionnaire has 22 items used to measure the phenomenon of burnout in professional groups, such as nurses, teachers, etc. The emotional fatigue subscale has 9 questions, the depersonalization subscale has 5 questions, and the individual performance subscale has 8 questions. The score range of each question varies from 0 to 6, and the acquisition of a higher score indicates more problems. Maslach's burnout validity theory for the subscales of emotional fatigue, depersonalization, individual performance, and general variables were documented to be 0.9, 0.65, 0.81, and 0.93, respectively (28). After obtaining the necessary permissions from the research and management department of the

hospitals, the researcher referred to the five hospitals and the purpose of the research was explained to the nurses. After obtaining their informed consent and strict observance of the criteria for entering and leaving time, they were provided with three questionnaires. To ensure accuracy in responding to the three questionnaires, nurses were asked to take the questionnaires home and complete them at rest and in their leisure time. One week after the questionnaires were distributed, the researcher returned to the hospital to collect the completed questionnaires. All 214 active nurses in the investigated hospitals were selected as samples.

In order to analyze the data obtained from the collected questionnaires, descriptive and inferential statistical methods were used. The data were analyzed by SPSS Software in two sections. In this research, using descriptive statistical methods, the frequency tables and charts, percentages, cumulative relative frequency, mean, median, standard deviation, minimum and maximum the collected data were described. After obtaining the normality of the data to investigate the research questions, the parametric statistical test of Pearson correlation was used to analyze the relationship between variables, and linear regression test was used to determine the prediction power of dependent variable. Also, in order to analyze the moderate role in the relationship between two variables, the Sobel test was used. This study is registered in Mazandaran University of Medical Sciences with ethic code of IR. MAZUMS.REC.1397.3297 .

### **3. Results**

Table (1) shows the demographic information of the subjects.

**Table 1.** Demographic characteristics of the samples

Demographic features	frequency	Frequency%
Male	39	18.22
Female	175	18.78
Total	214	100.00
Single	46	21.50
Married	168	78.50
Total	214	100.00
Less than 30 years old	57	26.64
31-40 years old	122	57.01
41-50 years old	30	14.02
More than 50 years old	5	2.34
Total	214	100.00
B.A.	187	87.38
M.A.	27	12.62
Total	214	100.00
Less than 5 years	49	22.90
6-10 years	56	26.17
11-15 years	75	35.50
16-20 years	20	9.35
More than 20 years	14	6.54
Total	214	100.00
Less than 1.5 billion	1	0.47
1.5-2.5 billion	114	53.27
2.5-3.5 billion	92	42.99
More than 3.5 billion	7	3.27
Total	214	100.00
Daily walk for half an hour	80	37.38
Daily physical exercises	18	8.41
Physical exercises in the club twice a week	13	6.07
Lack of physical activity	103	48.13
<b>Total</b>	214	100.00

In the study of the status of emotional intelligence among nurses, 2 (0.93%) were found to have low levels of emotional intelligence, and 2 (0.93%) were moderate, while 210 (98.13%) were in the high level of emotional intelligence. To evaluate nurses' job burnout, 157 (73.36%) were documented to experience moderate job burnout, and 18 (8.41%) were at the high level of burnout. Regarding nurses' perceived social support, 53 (24.77%) were at middle level, and 161 (75.23%) were at the highest level of perceived social support.

The results of Kolmogorov-Smirnov test indicated that the data were normal, hence a parametric test was used. A linear regression analysis was used to investigate the relationship between emotional intelligence and social support with job burnout. Table 1 shows the regression between emotional intelligence variables and social support as independent variables and job burnout as a dependent variable. It should be noted that gender, marital status, education level, and service history of the subjects were the intervening variables.

**Table 2.** Correlation coefficient between emotional intelligence and social support with job burnout

	Job burnout		Results
	correlation coefficient	p-value	
Emotional intelligence	-0.335	0.0009	Significant
Social support	0.015	0.828	Non-significant

Correlation between job burnout with emotional intelligence was found to be -0.335 and p-value was less than 0.05, so there was a negative significant relationship between them. Also, the correlation between job burnout with social support was 0.015, indicating a significant

relationship between these two variables. As is shown in Table 2, in the simultaneous analysis of emotional intelligence and social support with job burnout, F statistics was 75.39, so the regression between emotional intelligence and social support with job burnout was significant.

**Table 3.** Regression coefficients between emotional intelligence and social support with burnout

variables	R <sup>2</sup> coefficient	Durbin Watson	$\beta$	$\beta$ standard	T statistics	p-value	Linearity VIF	results
Emotional intelligence	0.116	1.881	113.39	-0.34	9.20	0.0000	-	significant
Social support			0.10	0.06	-5.25	0.0000	-	significant
					0.89	0.3770	1.02	Non-significant

As can be seen in the table, the emotional intelligence variable with a standard coefficient of -0.34 and t-value of -5.25 showed a significant relationship with the burnout variable, whereas the social support variable with a standard coefficient of 0.06 and t-value of 0.89 did not show any significant relationship with job burnout. It should be noted that the value of the coefficient of R<sup>2</sup> model was 0.116, and the value of the Durbin Watson was equal to 1.881, which indicated that there was no auto correlation between the residuals, and the coincidence value of the VIF index was 1.02. The results showed that there was a significant and negative relationship between the emotional intelligence variable and job burnout, but there was not observed a significant relationship between perceived social supports and job burnout. The final finding was that, emotional

intelligence could predict job burnout, so promoting this variable might reduce job burnout, but social support variable was unable to predict job burnout.

In examining the relationship between emotional intelligence and perceived social support of nurses, the correlation between emotional intelligence with perceived social support was equal to 0.125, therefore no significant relationship was found between these two variables. At the same time, in examining the relationship between perceived social support and nursing job burnout, the correlations between perceived social support and emotional exhaustion, depersonalization, individual performance, and job burnout were equal to 0.12, 0.070, -0.045, and 0.015, respectively. As a result, there was no significant relationship between perceived social support and job burnout and its components.

In examining the relationship between emotional intelligence and nurses' job

burnout, the correlations between emotional intelligence and emotional exhaustion, depersonalization, individual performance, and burnout were equal to -0.263, -0.125, -0.313, and -0.335, respectively, resulting in a significant relationship between emotional intelligence

with job burnout and emotional exhaustion and individual performance components. Finally, in order to investigate the mediating role of the perceived social support in the relationship between emotional intelligence and burnout, each Sobel method was used.

**Table 4.** The mediating role of perceived social support in the relationship between emotional intelligence and burnout, based on the Sobel method

Relationship type	Non-standard coefficients	standard error	Sobel statistics	P-Value probability	Results
The direct effect of emotional intelligence on social support	0.116	0.063	-1.763	0.0823	Non-significant
The effect of emotional intelligence on burnout in the presence of social support	-0.534	0.102			

According to this method, the amount of regression coefficient of emotional intelligence on the social support variable was equal to 0.116, the amount of regression coefficient of emotional intelligence on the dependent variable of burnout with the presence of the mediating variable of perceived social support was equal to -0.534, and according to the Sobel statistic, Sobel statistics was equal to -1,736 and P-Value was greater than 0.05. As a result, the effect of mediating role of social support variable was not significant. Therefore, perceived social support was found to play not any mediator role in the relationship between emotional intelligence and job burnout in nurses of intensive care units of educational and medical centers of Mazandaran University of Medical Sciences.

#### 4. Discussion

There was a significant inverse relationship between emotional intelligence and burnout; but there was no significant relationship between social support with job burnout and emotional intelligence with

social support. In the relationship between emotional intelligence and burnout, social support was found to play not a mediating role.

The results of Mosavi's research about the relationship between emotional intelligence and job burnout showed that there was a negative and significant relationship between emotional intelligence and burnout. Also, the results of multivariate regression showed that emotional intelligence can predict job burnout negatively (29). Such a result was obtained in this study, and Pearson correlation and linear regression showed a significant and negative relationship emotional intelligence and job burnout had the ability to predict negative changes in job burnout. The findings of Mohammadi Fakhar et al., showed a significant relationship between all social support of supervisor and depersonalization. Also, there was a significant relationship between emotional and informational support of supervisor with individual failure. Thus, nursing managers can reduce job burnout in nurses

by creating social support in the workplace (30). Findings of a study by Bayrami et al., showed that emotional intelligence plays a significant role in the prediction of job burnout changes in nurses (31). The results of the research by Năstasă Laura showed that personal development among healthcare professionals is affected by the level of emotional intelligence development and is supported by the importance of exercises that emphasize the development of emotional intelligence among healthcare professionals (32).

Regarding the status of emotional intelligence among nurses in intensive care units, the findings showed that the majority of subjects had high emotional intelligence, and in this regard, nurses were in a good position. Bagheri et al., reported that the overall state of emotional intelligence among nursing students was appropriate (33). The results of Benson et al. showed that nursing students had high levels of emotional intelligence scores (34).

Concerning the burnout situation, among nurses in intensive care units, the results showed that most of the subjects had a moderate burnout rate, and in this regard, nurses were not in a proper situation. In the study of Rezaei Ronaghi et al. (35), the results indicated that 47% to 63% of the studied units showed emotional exhaustion, depersonalization and individual failure at the moderate level. The results of Jafari-Araqi et al. (36), on the other hand, showed that burnout levels in emotional exhaustion and depersonalization were 22% and 38%, respectively, while this rate was 100% in individual incompetence. The study findings of Mohammadi-Fakhar et al. showed that in most of the research units, nurses experienced emotional exhaustion equal to 61% and high level of personal failure equal to 97%, whereas

depersonalization among them was moderate (30). Therefore, the results of these two studies were not consistent with each other, because in the present study, the majority of nurses with burnout were moderate. The results of the study by Teixeira et al. under the heading of job burnout in the intensive care unit, considering the probable prevalence and frequency of new agents' risk, showed that 31% of employees had a high level of burnout, 33% experienced emotional exhaustion, 27% had high level of depersonalization, and 23% of them felt personal insecurity (at a low level) (37).

Concerning the status of perceived social support among nurses in the intensive care units, the findings showed that the majority of subjects had a high perception of social support. The findings of Mohammadi-Fakhard et al. (30) showed that the average score of social support of supervisor in different dimensions ranged from 2.1 to 2.03. Due to the high score of nurses in perceived social support, the results of these two studies were not in line and consistent with each other.

Concerning the relationship between emotional intelligence and perceived social support, in nurses in intensive care units, the findings showed that there was no significant relationship between emotional intelligence with perceived social support. In a study by Koliyaei et al., social support variable as a mediator variable had a significant effect on the relationship between emotional intelligence variable and organizational citizenship behavior. At the same time, emotional intelligence had a significant relationship with social support (38). In the research of Chengting et al., the results showed that emotional intelligence and social support from the workplace could protect teachers from burnout (39).



The reason for the inconsistency of the results of the present study about the lack of a meaningful relationship between emotional intelligence with social support, and social support with burnout can be due to the different environments of conducting research. Cultural, social and different conditions governing organizations can also be considered as non-controlling factors affecting the employee's perception about social support. On the other hand, it should be noted that the conditions of the statistical population of the present research (nurses of intensive care units) were generally different from many jobs, and it was possible that these different conditions influenced the outcome of the research.

Concerning the relationship between perceived social support and burnout in nurses in intensive care units, the findings showed that there was no significant relationship between perceived social supports with job burnout. The results of the study of Rezaei Ronaghi et al. showed that there was no significant correlation between total score of social support and total burnout score (35). The results of another study by Ashouri showed that perceived social support had a significant role in predicting the nurses' burnout (40). The results of multiple regression analysis in Movahedi et al.'s research, on the other hand, showed that dimensions of perceived social support can explain 29% of job burnout variance in nurses, which meant that family and friends components had significant roles among supporting resources, and they can predict job burnout, but other important persons in this prediction did not have meaningful contribution (41). The findings of Mohammadi-Fakhar et al. showed that there was a meaningful relationship between all social support of the supervisor

and the depersonalization. Also, there was a significant relationship between emotional and informational support of supervisor with individual failure (30). In a research conducted by Li, the results showed a significant relationship between these two variables, while in the present study, there was found no significant relationship between social supports with burnout (42). The results of the research by Lambert et al. showed that social support had a significant and inverse relationship with burnout (43).

Concerning the relationship between emotional intelligence and burnout in nurses in intensive care units, the findings of the present study showed that there was a significant relationship between emotional intelligence with job burnout, and between emotional exhaustion with individual performance factors. The research findings of Mosavi also showed that there was a negative and significant relationship between emotional intelligence with job burnout (29). Results of Tavan showed that there was a significant positive correlation between emotional intelligence with emotional exhaustion and depersonalization of nurses. There was a significant negative correlation between emotional intelligence with personal adequacy (44). Findings of the research by Bayrami et al. showed that emotional intelligence had a significant role in the prediction of burnout changes in nurses (31). Their findings showed that emotional intelligence had a direct effect on burnout and could be considered as a good predictor of job burnout (45). The research results of Ekermans showed that high emotional intelligence had a significant relationship with two dimensions of job burnout: emotional exhaustion and nurses' depersonalization (46). The results of their

study showed that there was a significant relationship between emotional intelligence and job burnout, so that people with high emotional intelligence had less job burnout (47). In explaining the relationship between emotional intelligence and the dimension of individual performance, it can be concluded that person's adequacy is considered as a response to adaptation or emotional exhaustion, and those with a high emotional intelligence have higher personal adequacy (less personal performance reduction). Also, the reason for inconsistency with some studies about the relationship between emotional intelligence and depersonalization can be due to the different background of the study and the number of statistical population.

Concerning the mediator role of perceived social support, in the relationship between emotional intelligence and job burnout in nurses in intensive care units of educational and medical centers of Mazandaran University of Medical Sciences, the findings showed that perceived social support does not play a mediator role in the mentioned relationship. The results of the research by Zeidner and Matthews showed that there was a mediator role of the perceived social support in the relationship between emotional intelligence (EI) with mental disorder, and path analysis revealed that social support was an important intermediary of EI's effects on anxiety (48). In the research by Chengting et al., the results showed that workplace social support manages the relationship between adjective emotional intelligence with the burnout of teachers (39). The status of emotional intelligence among nurses in intensive care units was favorable, and the major job burnout was middle, and their

perceived social support was appropriate. The results of Pearson correlation test showed that the relationship between emotional intelligence with perceived social support and perceived social support with burnout was not significant, but the relationship between emotional intelligence with burnout and emotional exhaustion with personal performance was significant and negative. According to the results of Sobol test, social support had failed to play a mediator role in the relationship between emotional intelligence with burnout.

### **Limitation**

This study like the other studies in social science context have some limitations as follows; The first limitation was in statistical population, since this study was limited to the statistical population of nurses in the selected intensive care units of Mazandaran University of Medical Sciences, so the results can just be generalized to this scope. The second limitation was regarding the lack of collaboration of some people in intervention group for research; although we tried to explain that this was just an academic study, they did not accept. And finally, like so many other managerial studies, its cross-sectional form was its main limitation. This meant that the results of this study could not be generalized to other statistical populations, or in case of replication of the study, for example, in the following years, the results could differ from the current results.

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