



# The Relationship Between Emotional Intelligence and the Moral Performance of Nurses

Seyed Reza Mousavi <sup>1</sup>, Pegah Hassanvand <sup>2</sup>, Ali Mahmoudi <sup>3</sup>, Seyedeh Zahra Hosseinigolafshani <sup>1, 4</sup>, Maryam Rajabi <sup>5</sup> and Farnoosh Rashvand <sup>1, 4, \*</sup>

<sup>1</sup>Social Determinants of Health Research Center, Research Institute for Prevention of Non-Communicable Diseases, Qazvin University of Medical Sciences, Qazvin, Iran

<sup>2</sup>Department of Adult Health Nursing, School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran

<sup>3</sup>Student Research Committee, Qazvin University of Medical Sciences, Qazvin, Iran

<sup>4</sup>Department of Nursing, Qazvin School of Nursing and Midwifery, Qazvin University of Medical Science, Qazvin, Iran

<sup>5</sup>Clinical Research Development Unit, Shahid Rajaee Hospital, Qazvin University of Medical Sciences, Qazvin, Iran

\*Corresponding author: Social Determinants of Health Research Center, Research Institute for Prevention of Non-Communicable Diseases, Qazvin University of Medical Sciences, Qazvin, Iran. Email: f.rashvand@qums.ac.ir

Received 2023 October 02; Revised 2023 November 14; Accepted 2023 November 21.

## Abstract

**Background:** Emotional intelligence and moral performance are considered 2 very important components in the quality of care and improvement of patients.

**Objectives:** The purpose of this study was to examine the relationship between emotional intelligence and the moral performance of nurses.

**Methods:** The present study was a cross-sectional study of the correlation type. A number of 220 nurses from the departments (internal and surgery) of medical educational hospitals affiliated with Qazvin University of Medical Sciences were selected by a stratified random sampling method between December 2022 and March 2022. The Standard Questionnaire of Siberia Schering's Emotional Intelligence (Goleman model) and the Nurses' Performance Questionnaire according to the nursing code of ethics were used to collect data. The collected data were analyzed using SPSS version 26 and descriptive and inferential statistical tests (*t*-test, Pearson's correlation coefficient, simple and multivariate linear regression).

**Results:** The average scores of emotional intelligence and moral performance were  $90.12 \pm 11.93$  and  $124.55 \pm 24.62$ , respectively. Pearson's correlation test showed a significant relationship between emotional intelligence and moral performance ( $r = 0.232$ ,  $P = 0.001$ ). In the examination of emotional intelligence among nurses, 100 nurses (45.5%) obtained scores lower than the overall average of 4.92, while 120 nurses (54.5%) achieved scores higher than the average. In the examination of the frequency of ethical performance scores, the majority of nurses, 158 individuals (71.8%), demonstrated high ethical performance, while 60 individuals (27.3%) exhibited average ethical performance, and only 2 individuals (0.9%) had low ethical performance. The test results also indicated a statistically significant difference between emotional intelligence and job position ( $P < 0.001$ ) and work experience ( $P = 0.12$ ), as well as ethical performance of nurses and job position ( $P = 0.035$ ), work experience ( $P = 0.001$ ), and gender ( $P = 0.009$ ).

**Conclusions:** Emotional intelligence and moral performance are 2 important interrelated factors that influence each other. Therefore, these results have important consequences for the policymakers of health care systems, including improving the level and quality of nursing care.

**Keywords:** Emotional Intelligence, Moral, Performance, Nurses, Ethics

## 1. Background

Regarding the importance of the nursing profession, nurses should have the moral ability to provide appropriate and professional care in addition to clinical competence (1). In a way, ethical practice can be considered the foundation of safe nursing care (2). Ethics is considered a set of positive mental and spiritual behaviors and

characteristics, and acting ethically is a set of acceptable regulations that people should follow or avoid in their profession. In fact, promoting the principles of ethical and professional practice by emphasizing the teaching of ethical principles is the only way to strengthen people's trust in the medical group (3).

Work ethics and culture in Iran are at a lower level compared to developed countries and have become a

social necessity (4). A low work culture may lead to a sharp drop in work capacity and a diminished sense of responsibility (5). Therefore, it is necessary to consider the weakness of proper work culture and ethics in society as a social and economic problem, and to better identify the current situation in terms of work culture and ethics and the factors affecting it, a scientific study should be carried out (6).

Work ethics is a fundamental value that, when lacking in individuals, organizations, or society, can inadvertently hinder the ability to perform work correctly and productively (3). The existence of the ethical element is an integral part of all dimensions of care and is a universal need. Commitment to ethics in care is known as the central core of nursing values and shows the degree of concern for the patient and the level of respect for his or her personality in nursing care (7). To be successful in their moral performance, nurses need to have standards of skills and capabilities, including emotional intelligence (8).

Emotional intelligence is characterized by a set of skills related to self-discipline, determination, self-motivation, and sensitivity to others' feelings (3). Today, it is believed that emotional intelligence and the ability to use it are important factors in individual success (9). In addition, emotional intelligence can be defined as a set of cognitive and emotional abilities that help a person gain awareness by receiving, evaluating, and expressing emotions, making wise decisions, and showing responsible behavior by balancing his or her thoughts and emotions (10). Emotional intelligence includes self-awareness, self-control, social awareness, and social management and is located in a part of the brain called the amygdala (6, 11).

Today, emotional intelligence is widely used in various fields of education, research, management, psychology, and nursing, and the main purpose of its application is to increase and improve the quality of services (10). To provide better services and take better care of patients, nurses need to communicate with them and understand their needs since paying attention to emotional intelligence is valuable in establishing communication (3). Research has shown that nurses who are more aware of their emotions show more appropriate behaviors in interaction and communication with patients and can better manage patients' performance (12). From a practical point of view, ignoring feelings or a lack of emotional intelligence causes situations to be out of control (9); furthermore, low emotional intelligence affects the happiness and health of nurses, and their management will face difficulties in dealing with problems and conflicts (6). Studies reported different

levels of emotional intelligence in nurses in Iran, from low to optimal (10, 13, 14). In nursing students, low emotional intelligence leads to high levels of anxiety and the avoidance of confrontation with the supervisor (15).

As mentioned, emotional intelligence has a very effective role in the quality of care in the nursing profession. In addition, despite the clinical problems and serious responsibility of the nursing profession, correct and timely clinical decision-making can play a very effective role in the care and recovery of patients. In this regard, several studies have been done so far. Deshpande and Joseph showed that emotional intelligence as an individual factor can affect the moral behavior of nurses (16). Some other studies have also confirmed the significant relationship between emotional intelligence and the moral behavior of employees and showed that improving the level of emotional intelligence can help increase people's work ethic (17, 18). Because the practice of nursing is intrinsically a value and moral issue, the quality of health care also depends on the performance of nurses. Therefore, the moral performance of nurses is also very important in matters of care.

However, a study that specifically deals with the relationship between emotional intelligence and moral performance has not been conducted. Also, in this field, there is not enough evidence about the influencing and confounding factors affecting the emotional intelligence and moral performance of nurses. By evaluating the emotional intelligence of nurses and comparing it with their ethical performance, it is possible to identify patterns that may influence the decision-making and ethical behaviors of nurses. It seems that evaluating emotional intelligence in nurses is necessary to solve or compensate for their problems in the field of adaptation, strengthening individual competence, and improving interpersonal relationships. On the other hand, the relationship between emotional intelligence and the moral performance of nurses can be a good guide for policymakers and nurse managers in the field of implementing interventions aimed at improving the moral performance of individuals. In addition, this study can scientifically and reliably confirm the relationships between emotional intelligence and ethical performance in nurses. The reliability and importance of this connection further emphasize its significance for organizations and managers in the selection, training, and promotion of nurses to create an ethical work environment and maintain professional standards. Therefore, a study titled "investigating the relationship between emotional intelligence and moral performance of nurses working in hospitals affiliated with Qazvin University of Medical Sciences" was conducted in 2022.

## 2. Objectives

The purpose of this study was to examine the relationship between emotional intelligence and the moral performance of nurses.

## 3. Methods

### 3.1. Study Design

The current research is a cross-sectional study of the correlation type that was conducted on 220 nurses in educational-therapeutic centers (Bouali Sina, Velayat, and Shahid Rajaei) in Qazvin city from December 2022 to March 2022.

### 3.2. Study Setting and Participants

The research population included nurses working in the internal and surgical wards of educational-therapeutic centers (Bouali Sina, Velayat, and Shahid Rajaei) in Qazvin city.

Inclusion criteria were willingness to participate in the study, having a minimum bachelor's degree in nursing, and having more than 6 months of work experience in the mentioned departments (19, 20). The only exclusion criterion was incomplete completion of the questionnaires.

To estimate the sample size, according to Ranjdoost's article, the correlation between emotional intelligence and the performance of nurses is estimated to be  $r = -0.212$ , considering the first type error  $\alpha = 0.05$  (95% confidence level) and the second type error  $\beta = 0.15$  (test power 85%), and according to the following relationship, 220 nurses will be included in the study.

$$\begin{aligned} n &= \frac{(Z_{1-\frac{\alpha}{2}} + Z_{1-\beta})^2}{w^2} + 3 \\ &= \frac{(1.96 + 1.04)^2}{-0.215^2} + 3 \\ &= \frac{9}{0.0462} + 3 \\ &\approx 200 \end{aligned} \quad (1)$$

$$w = \frac{1}{2} \ln \left( \frac{1+r}{1-r} \right) = -0.215 \quad (2)$$

Sampling is performed using a stratified random sampling method with proportional allocation. In this way, 3 university-affiliated referral hospitals, namely Velayat, Bouali Sina, and Rajaei hospitals were selected as strata. Then, considering the number of staff members in each hospital, which are 432 in Velayat Hospital, 418 in Bouali Sina Hospital, and 304 in Rajaei Hospital, a

proportional allocation method was used. Based on the required sample size of 220 participants, which consisted of 90 nurses from Velayat Hospital, 66 nurses from Bouali Sina Hospital, and 64 nurses from Rajaei Hospital, simple random sampling was used to select an equal number of participants from the internal medicine and surgical departments of each hospital. These selected participants were included in the desired study.

In this research, after receiving the official letter of introduction from the Research Vice-Chancellor of Qazvin University of Medical Sciences, the researchers went to the designated educational treatment centers in Qazvin. The researchers, in coordination with the educational supervisors of the respective hospitals, invited the individuals to participate in the study by paying attention to the appropriate criteria and methods of selection. To collect data, they attended the selected hospitals on all days of the week on day and night shifts and started sampling. After explaining the objectives of the research and obtaining written consent, the questionnaires were given to the subjects, and they were asked to answer all the questions while emphasizing the confidentiality of all information. After monitoring the process of completing the questionnaires and ensuring their correct and complete filling out, the questionnaires were collected.

### 3.3. Data Collection and Measurement

To collect demographic data, the level of emotional intelligence and moral performance of nurses, the demographic characteristics questionnaire, the Standard Questionnaire of Siberia Schering's Emotional Intelligence (21), and the questionnaire of nurses' performance according to nursing ethics were used, respectively.

This questionnaire prepared by the researcher included age, gender, marital status, educational degree, job position, and work experience. The Emotional Intelligence Questionnaire has 33 items that measure the 5 dimensions of emotional intelligence, consisting of self-awareness, self-control, self-motivation, empathy, and social skills. This questionnaire is scored on a 5-point Likert scale (completely disagree, disagree, neutral, completely agree, and agree). Finally, each subject receives 6 separate marks, of which 5 points are related to each of the components, and 1 is the total score of emotional intelligence. The range of the total score of this questionnaire is from 33 to 165; the higher the score, the higher the emotional intelligence level. In their master's thesis, Mansoori obtained a reliability coefficient of 0.85 for the questionnaire through internal consistency (Cronbach's alpha). Furthermore, the test's validity has

been reported to demonstrate its accuracy and integrity (22).

A questionnaire of nurses' performance according to nursing ethics was used to measure the ethical performance of nurses. This questionnaire has 34 items that measure the components of nurse and society, nurse and professional commitment, nurse and providing clinical services, nurse and colleague, and nurse and education and research. The scoring of this questionnaire is on a 5-point Likert scale; in this way, the option "always" is assigned a score of 5, "often" is assigned a score of 4, "sometimes" is assigned a score of 3, "rarely" is assigned a score of 2, "never" is assigned a score of 1, and "I do not know" is assigned a score of 0. Finally, the range of scores obtained from the questionnaire is from 0 to 170. If a person's score is 0 to 56, it means the low limit, 56 to 113 means the average limit and a score higher than 113 means the high limit of the nurse's commitment to nursing ethics. In the research of Esmailpourzanjani et al., the validity of the questionnaire on nurses' performance to the nursing ethics code has been confirmed by professors and experts in this field; moreover, in the study conducted by Esmailpourzanjani et al., the reliability of the questionnaire was also determined using Cronbach's alpha coefficient. The questionnaires were completed by 20 individuals from the sample, including both patients and nurses (who were part of the study sample). The Cronbach's alpha coefficient for the Nursing Ethical Code Questionnaire was calculated to be 0.94, indicating a high level of internal consistency and reliability, and it was confirmed as such (21). The reliability of the Emotional Intelligence Questionnaire and the moral performance questionnaire in this study was calculated using Cronbach's alpha in a sample of 60, and their rates were estimated to be 78% and 85%, respectively. It should be mentioned that these 60 samples were separated from the total samples and were not analyzed.

#### 3.4. Data Analysis

The collected data were analyzed using SPSS version 26. Descriptive statistics, including mean and SD for quantitative variables and percentage for qualitative variables, were used. To check the normality of the quantitative variables of the study, the Kolmogorov-Smirnov test was used, which confirmed the normality of the data. Furthermore, analytical statistics (independent *t*-test, multivariate linear regression, and Pearson's dependence) were used to analyze the data further.  $P < 0.05$  was considered a significant level. An independent *t*-test was used to examine the relationship between emotional intelligence and the moral performance of nurses at the levels of dichotomous

variables (such as gender). A 1-way analysis of variance (ANOVA) was used to compare the levels of variables with multiple categories. Pearson's correlation coefficient was used to investigate the correlation between emotional intelligence and the ethical performance of nurses. To complement the results and estimate the impact of emotional intelligence and other demographic variables on the level of ethical performance of nurses, a single-variable and multiple-variable linear regression model was used. In addition, the confidence interval in this study was 0.95. The management of outliers was investigated using the quantile-quantile plot method, and no outliers were identified.

#### 3.5. Ethical Considerations

The present study was approved by the Ethics Committee of Qazvin University of Medical Sciences (code: IR.QUMS.REC.1401.222). Written informed consent was obtained from the participants after the purpose of the study was explained to them, and their privacy and confidentiality were ensured.

## 4. Results

The results of the descriptive analysis with 220 nurses showed that the mean and SD of the nurses' age were  $33.14 \pm 6.42$  years. More information about the frequency distribution of demographic variables is given in Table 1.

Table 2 examines and describes the variables of moral performance and emotional intelligence in nurses. According to the obtained results, the mean and SD of total moral performance and emotional intelligence are estimated to be  $124.55 \pm 24.62$  and  $92.04 \pm 12.55$ , respectively. Therefore, it can be concluded that the studied nurses obtained an average level of emotional intelligence and a high level of moral performance.

In the examination of emotional intelligence among nurses, 100 nurses (45.5%) obtained scores lower than the overall average of 4.92, while 120 nurses (54.5%) achieved scores higher than the average. In the examination of the frequency of ethical performance scores, the majority of nurses, 158 individuals (71.8%), demonstrated high ethical performance, while 60 individuals (27.3%) exhibited average ethical performance, and only 2 individuals (0.9%) had low ethical performance.

The independent *t*-test was used to investigate the difference between emotional intelligence and moral performance with demographic variables. In examining nurses' emotional intelligence, no statistically significant difference was observed between nurses' gender, education level, and marital status ( $P > 0.05$ ).

**Table 1.** Frequency Distribution of Demographic Variables

Variables	No. (%)
<b>Gender</b>	
Female	162 (73.6)
Male	58 (26.4)
<b>Marital status</b>	
Single	95 (43.2)
Married	125 (56.8)
<b>Education</b>	
Bachelor	161 (73.2)
Master	59 (26.8)
<b>Job position</b>	
Nurse	190 (86.4)
Nurse manager	30 (13.6)
<b>Work experience</b>	
0 - 5	46 (20.9)
6 - 10	81 (36.8)
11 - 15	40 (18.2)
> 15	53 (24.1)
<b>Workplace</b>	
Bouali Sina	
Surgical	33 (30)
Internal	33 (30)
Rajaei	
Surgical	32 (29.1)
Internal	32 (29.1)
Velayat	
Surgical	45 (40.9)
Internal	45 (40.9)
<b>Total</b>	<b>220 (100)</b>

In this study, a statistically significant difference was observed between emotional intelligence, job position ( $P < 0.001$ ), and work experience ( $P = 0.012$ ).

In the investigation of moral performance, no statistically significant difference was observed between the level of education, marital status, and workplace of nurses ( $P > 0.05$ ). However, a statistically significant difference was observed between nurses' moral performance and gender ( $P = 0.009$ ), job position ( $P = 0.035$ ), and work experience ( $P = 0.001$ ). Furthermore, using Pearson's correlation coefficient, there was a direct and positive relationship between the variables of age, emotional intelligence, and performance, which was not statistically significant ( $P > 0.05$ ).

The relationship between emotional intelligence and the moral performance of nurses was investigated using Pearson's correlation coefficient test. The results of this test showed a significant correlation between emotional intelligence and the moral performance of nurses ( $r = 0.232$ ,  $P = 0.001$ ).

In continuation, the study proceeded to examine the impact of each individual variable, including demographic factors and emotional intelligence, on the ethical performance of nurses. Subsequently, the combined effect of all variables was investigated in the adjusted multivariate model, and the results are presented in [Table 3](#).

According to the results obtained from the estimated single-variable models in [Table 3](#), emotional intelligence ( $\beta = 0.232$ ), gender ( $\beta = -0.177$ ), job position ( $\beta = 0.142$ ), and work experience ( $\beta = 0.272$ ) had statistically significant effects on the level of ethical performance of nurses ( $P < 0.05$ ). Therefore, with an increase of one unit in the emotional intelligence scores of nurses, their ethical performance is increased by 0.232 units. Additionally, male nurses had a lower ethical performance by 0.177 units compared to female nurses.

Additionally, in the examination of job positions, nurse managers had a higher ethical performance of 0.142 units compared to nurses. Nurses with more than 15 years of work experience also had a higher ethical performance of 0.272 units compared to nurses with 6 - 10 years of work experience. In the analysis of other variables under study, married nurses had a lower ethical performance of 0.078 units compared to unmarried nurses, nurses with a master's degree had a lower ethical performance of 0.042 units compared to nurses with a bachelor's degree, and nurses with 0 - 5 years of work experience had a lower ethical performance of 0.034 units compared to nurses with 11 - 15 years of work experience. Nurses from Rajaei Hospital had a lower ethical performance by 0.032 units, and nurses from Velayat Hospital had a lower ethical performance by 0.096 units compared to nurses from Bouali Sina Hospital. However, none of these variables had a statistically significant effect on ethical performance ( $P > 0.05$ ).

In the multiple regression analysis and examination of the simultaneous effects of all variables, 3 variables, emotional intelligence ( $\beta = 0.098$ ), gender ( $\beta = -0.166$ ), and work experience of more than 15 years ( $\beta = 0.345$ ), had a statistically significant impact on the level of ethical performance of nurses ( $P < 0.05$ ). The other variables under study did not have a statistically significant effect on ethical performance ( $P > 0.05$ ).

Furthermore, the estimated model as a whole was statistically significant ( $P = 0.001$ ,  $F = 4.030$ ), and the



**Table 2.** General Description of Variables of Moral Performance and Emotional Intelligence of Nurses

Variables and Dimensions	Number of Items	Minimum	Maximum	Mean $\pm$ SD
<b>Ethical performance</b>				
Nurses and society	3	0	15	11.24 $\pm$ 2.59
Nurse and professional commitment	13	8	75	48.16 $\pm$ 11.60
Nurse and providing clinical services	12	10	66	44.65 $\pm$ 10.13
Nurse and colleague	2	2	35	5.69 $\pm$ 2.57
Nurse, education, and research	4	3	20	20 $\pm$ 3.78
Ethical performance		42	167	124.55 $\pm$ 24.62
<b>Emotional intelligence</b>				
Awareness	8	8	35	21.12 $\pm$ 4.35
Self-control	7	9	32	19.30 $\pm$ 3.67
Self-motivation	7	13	27	19.61 $\pm$ 3.09
Empathy	6	6	44	16.13 $\pm$ 3.42
Social skills	5	5	21	13.94 $\pm$ 2.92
Total emotional intelligence	33	50	126	92.04 $\pm$ 12.55

model's prediction rate was 22%. The Durbin-Watson statistic confirmed the independence assumption of errors, and the values of the variance inflation factor (VIF) supported the assumption of no multicollinearity among the independent variables in the model.

## 5. Discussion

The present study was conducted with the aim of investigating the relationship between emotional intelligence and the level of moral performance of nurses. In the present study, nurses had almost average emotional intelligence, which is consistent with the results of the study by Ghaedamini et al. (23). The highest and lowest means were related to the subscales of "self-awareness" and "social skills," respectively. This is despite the fact that in the study conducted by Masoudi and Alavi, nurses had more than average emotional intelligence, but still, the highest and lowest averages were related to the "self-awareness" and "social skills" subscales, respectively (13). It must be mentioned that the difference in the mean score of emotional intelligence in different studies may be caused by different research communities because emotional intelligence can be related to people's personal and social lives (18). Therefore, the emotional intelligence levels of nurses are still discussed, and it is recommended that more studies be conducted in this field in different research communities. High emotional intelligence can play an important role in effective clinical communication between patients and nurses (10, 13). Therefore, the lack of nurses with high levels of emotional

intelligence is worrying, so it seems that measures such as training nurses to recognize the dimensions of emotional intelligence and applying them at the bedside can be effective.

In the present study, most nurses had a high level of moral performance. The highest and lowest averages were assigned to the "nurse and professional commitment" and "nurse and colleague" subscales, respectively. In this regard, in some studies, most of the nurses considered their level of performance in accordance with nursing ethics to be favorable (24, 25). Meanwhile, patients often stated that nurses' level of adherence to ethical principles was lower (24, 26). This difference may indicate that nurses have a weaker moral performance in reality. This issue is very worrying because, in this case, nurses may not take action to improve their moral performance (21, 24). One of the reasons for this can be the completion of questionnaires as self-reported. In this way, a person may have a desire to show his moral performance. Based on the findings of this study, the high ethical performance of nurses is promising; however, it is recommended that the views of patients receiving services also be evaluated in this regard.

The results of the study indicated that the emotional intelligence of nurses has a direct and meaningful relationship with the level of their moral performance. Thus, improving nurses' emotional intelligence can lead to an improvement in their moral performance. In this regard, the study of Deshpande and Joseph showed that nurses' emotional intelligence can significantly affect their ethical behavior (16). Alizadeh's study showed a

**Table 3.** Examining Predictors of Nurses' Moral Performance Using a Linear Multivariate Regression Model<sup>a</sup>

Variables	B (Single-Variable)	P-Value	B (Adjusted)	P-Value	Lower Limit	Upper Limit	VIF
<b>Emotional intelligence</b>	0.232	0.001	0.98	0.003	0.130	0.647	1.12
<b>Age</b>	0.059	0.380	0.105	0.118	0.001	0.163	1.72
<b>Gender</b>							
Female	-	-	-	-	-	-	-
Male	-0.177	0.009	-0.166	0.010	-16.28	-2.18	1.03
<b>Marital status</b>							
Single	-	-	-	-	-	-	-
Married	-0.078	0.249	-0.046	0.508	-9.04	4.48	1.20
<b>Education</b>							
Bachelor	-	-	-	-	-	-	-
Master	-0.042	0.538	-0.056	0.438	-10.92	4.74	1.29
<b>Job position</b>							
Nurse	-	-	-	-	-	-	-
Nurse manager	0.142	0.035	0.029	0.706	-8.79	12.96	1.50
<b>Work experience</b>							
0 - 5	-0.034	0.639	-0.043	0.557	-11.43	6.18	1.38
6 - 10	-	-	-	-	-	-	-
11 - 15	0.030	0.682	0.112	0.166	-2.98	17.27	1.64
> 15	0.272	< 0.001	0.345	< 0.001	9.85	29.74	1.65
<b>Workplace (hospital)</b>							
Bouali Sina	-	-	-	-	-	-	-
Rajaei	-0.032	0.689	-0.012	0.875	-7.47	8.77	1.46
Velayat	-0.09	0.230	-0.055	0.472	-10.31	4.79	1.48

Abbreviation: VIF, variance inflation factor.

<sup>a</sup> F = 4.03; P < 0.001; R<sup>2</sup> (adjusted) = 0.223; Durbin-Watson = 1.080.

significant relationship between emotional intelligence and its dimensions and employees' ethical behavior (18). Improving emotional intelligence in nurses has been shown to lead to various positive outcomes, including enhanced management of emotions and feelings, improved moral decision-making abilities, and improved overall performance (6, 10, 16). As the results of the study by Nouri and Dehghani showed, emotional intelligence training is significantly effective in increasing the work ethic of nurses (6). On the other hand, Austin et al. reached the conclusion that emotional intelligence is not directly related to the moral performance of nurses. The reason for this contradiction can be explained by the differences in the studied society, the cultural differences of the samples, and the number of samples studied (27). In the research community of the current study, it seems that nurses with high emotional intelligence and the ability to control emotions in the face of moral dilemmas provide

better moral performance and are more successful in making decisions.

In the present study, there was no significant difference in the emotional intelligence of nurses according to characteristics such as marriage, education level, and gender. In this regard, previous studies have shown different results. In the study conducted by Masoudi and Alavi, the emotional intelligence of nurses did not differ in terms of gender, but it did differ significantly in terms of education level (13). In the study of Khan et al., emotional intelligence did not differ according to the level of education, but it showed a significant difference according to gender (28). Emotional intelligence is a multifactorial concept of interrelated emotions, social competencies, skills, and facilitators that lead to wise decisions and responsible behavior in an individual (10, 13). Therefore, the difference in the results of the studies is somewhat expected. Despite this issue,

it is recommended that future research be conducted focusing on demographic factors affecting the emotional intelligence of nurses.

In our study, in addition to emotional intelligence, nurses' gender was also an effective factor in their moral performance; thus, female nurses had higher moral performance than male nurses. However, the study by Hosseinzadegan et al. showed no significant relationship between the score of professional behavior and the gender of nurses (29). This difference may be due to the use of different tools or differences in the training of human forces (21). In addition, in the present study, the number of female nurses was higher than that of male nurses, which may be influential in this issue. In addition, in some studies, it has been shown that the professional moral score of people in different hospital departments is different (17, 29). In the present study, nurses with high work experience had higher moral performance than others. In the study by Hosseinzadegan et al., nurses' professional ethics were not related to their work experience (28). Studies have shown that factors such as family, organizational variables, the effect of nursing work, nurses' concern about ethics, and past experiences can play an important role in nurses' responses to ethical problems (29, 30). Also, the working environment of this profession may cause moral dilemmas that make nurses perceive the working environment as morally unstable. Therefore, nurse managers should think of measures to create a suitable bed for a stress-free work environment (29, 31).

### 5.1. Limitations and Strengths

One of the limitations of the present study is the inappropriate understanding of some questionnaire questions by the samples, which the researchers solved by being with the samples and giving appropriate explanations. In Iran, no study has been conducted so far with the aim of investigating the relationship between emotional intelligence and the moral performance of nurses. Therefore, the present study is new. The findings of this study can be used as a basis for future research. Since this study was conducted only on nurses working in hospitals affiliated with Qazvin University of Medical Sciences, the results may not be generalizable to other societies and other periods. Therefore, it is recommended that similar studies be conducted in other research communities with a larger sample size.

### 5.2. Conclusions

The findings of the present study indicated the existence of a direct and significant relationship

between nurses' emotional intelligence and their moral performance. According to the findings of the present study, it seems that nurses with higher emotional intelligence are more successful in this profession. Because high emotional intelligence leads to the recognition and management of people's feelings and relationships, these people will also have a higher moral performance. Since professional nursing is in the direction of high moral values, nurses with higher moral performance will make better decisions when faced with moral dilemmas. In addition, considering the unfavorable levels of emotional intelligence in nurses, it seems that the implementation of educational interventions on knowing and how to use emotional intelligence in facing moral dilemmas will help in improving the decisions and moral performance of nurses. According to the findings of this research, researchers can conduct studies on the implementation of interventions aimed at improving the emotional intelligence of nurses and investigating their effects on their moral performance. The performance of nurses based on moral values is essential to providing care to patients. Therefore, paying attention to individual factors affecting it, such as emotional intelligence, is one of the things that nurses and nursing managers should pay special attention to. In this regard, nursing students, as future nurses, should receive the necessary training in nursing schools in the field of recognizing emotions, managing relationships, and improving their emotional intelligence. This will improve their moral performance in clinical environments. Also, knowing the effective or confounding factors in the relationship between emotional intelligence and moral performance can help to improve ethics in the process of nursing care. In this regard, it is recommended that similar studies be conducted in other research communities with a larger sample size.

### Acknowledgments

We would like to thank the respectable Vice President for Research at Qazvin University of Medical Sciences, the respectable staff in the Qazvin Nursing and Midwifery Department and affiliated hospitals, dear nurses, and respectable colleagues.

### Footnotes

**Authors' Contribution:** S. R. M., P. H., and F. R. conceived and designed the evaluation and drafted the manuscript. S. R. M., F. R., and Z. H. participated in designing the evaluation, performed parts of the statistical analysis, and



helped draft the manuscript. Z. H. and M. R. re-evaluated the clinical data, revised the manuscript, performed the statistical analysis, and revised the manuscript. A. M., S. R. M., and P. H. collected the clinical data, interpreted them, and revised the manuscript. F. R. and M. R. re-analyzed the clinical and statistical data and revised the manuscript. All authors read and approved the final manuscript.

**Conflict of Interests:** The authors declare that there are no conflicts of interest.

**Data Reproducibility:** The dataset presented in the study is available on request from the corresponding author during submission or after publication. The data are not publicly available due to privacy restrictions.

**Ethical Approval:** The present study was approved by the Ethics Committee of Qazvin University of Medical Sciences (ethics code: [IR.QUMS.REC.1401.222](#)).

**Funding/Support:** This study was not financially supported.

**Informed Consent:** Written informed consent was obtained from the participants after the purpose of the study was explained to them, and their privacy and confidentiality were ensured.

## References

- Jolae S, Bakhshandeh B, Mohammadebrahim M, Asgarzadeh M, Vashghanifarshani A, Shariat E, et al. [Nursing code of ethics in Iran: the report of an action research]. *Iranian Journal of Medical Ethics and History of Medicine*. 2010;**3**(2):45-53. Persian.
- Rashvand F, Salsali M, Ebadi A, Vaismoradi M, Jordan S, Griffiths P. Iranian nurses perspectives on assessment of safe care: an exploratory study. *J Nurs Manag*. 2016;**24**(3):417-26. [PubMed ID: [26462457](#)]. <https://doi.org/10.1111/jonm.12338>.
- Shahbazi S, Heidari M, Vanaki Z. [Today nursing need for emotional intelligence: Integrative review of literature]. *Q J Ners Manag*. 2012;**1**(3):55-64. Persian.
- Stamatopoulou M, Galanis P, Tzavella F, Petrides KV, Prezerakos P. Trait Emotional Intelligence Questionnaire-Adolescent Short Form: A Psychometric Investigation in Greek Context. *J Psychoeduc Assess*. 2017;**36**(5):436-45. <https://doi.org/10.1177/0734282916687706>.
- Moeidfard S. [Work Ethics among State Office Employees of the Tehran Provincial Administration]. *Social Welfare*. 2007;**6**(23):321-44. Persian.
- Nouri L, Dehghani Y. [The Effectiveness of Education of Emotional Intelligence on Work Ethic Belief of Emam Reza Nursing Staff in Kaboodarahang]. *Avicenna J Nurs Midwifery Care*. 2019;**26**(6):349-56. Persian. <https://doi.org/10.30699/sjnhmf.26.6.349>.
- Goli R, Jasemi M, Esmaeili R, Khalkhali H. [Nursing codes of ethics education based on lecture on moral performance of nursing students: A quasi-experimental study]. *Nurs Midwifery J*. 2020;**18**(5):369-78. Persian.
- Reader TW, Flin R, Cuthbertson BH. Communication skills and error in the intensive care unit. *Curr Opin Crit Care*. 2007;**13**(6):732-6. [PubMed ID: [17975399](#)]. <https://doi.org/10.1097/MCC.0b013e3282f1bb0e>.
- Omidi N, Nasrollahi F, Omidi MR. [Modelling of the Relationship between Critical Thinking and Emotional Intelligence of Nurses]. *Iranian Journal of Medical Ethics and History of Medicine*. 2019;**12**:73-81. Persian.
- Ranjdoost S. [The Relationship between Spiritual Intelligence and Emotional Intelligence with Performance of Female Nurses in Tabriz Hospitals in 2018]. *Journal of Pizhūhish dar Dīn va Salāmat*. 2020;**6**(1):19-35. Persian.
- Rostami M, Movaghari MR, Taghavi T, Mehran A. [The relationship between emotional intelligence and coping styles of nurses in hospitals in Kermanshah University of Medical Sciences]. *Iran J Nurs Res*. 2016;**11**(1):51-61. Persian.
- Stichler JF. Emotional intelligence. A critical leadership quality for the nurse executive. *AWHONN Lifelines*. 2006;**10**(5):422-5. [PubMed ID: [17069575](#)]. <https://doi.org/10.1111/j.1552-6356.2006.00083.x>.
- Masoudi K, Alavi A. [Relationship Between Nurses' Emotional Intelligence with Clinical Decision-Making]. *Avicenna J Nurs Midwifery Care*. 2021;**29**(1):14-22. Persian. <https://doi.org/10.30699/ajnm.29.1.14>.
- Raeissi P, Zandian H, Mirzarahimy T, Delavari S, Zahirian Moghadam T, Rahimi G. Relationship between communication skills and emotional intelligence among nurses. *Nurs Manag (Harrow)*. 2019;**26**(2):31-5. [PubMed ID: [31468761](#)]. <https://doi.org/10.7748/nm.2019.e1820>.
- Dugue M, Sirost O, Dosseville F. A literature review of emotional intelligence and nursing education. *Nurse Educ Pract*. 2021;**54**:103124. [PubMed ID: [34175653](#)]. <https://doi.org/10.1016/j.nepr.2021.103124>.
- Deshpande SP, Joseph J. Impact of Emotional Intelligence, Ethical Climate, and Behavior of Peers on Ethical Behavior of Nurses. *J Bus Ethics*. 2009;**85**(3):403-10. <https://doi.org/10.1007/s10551-008-9779-z>.
- Dehghani A, Ordoubadi N, Shamsizadeh M, Parviniyan Nasab AM, Talebi M. [Perspective of patients about compliance with standards of professional ethics in nursing practice]. *J Nurs Educ*. 2014;**3**(2):76-84. Persian.
- Alizadeh Z. [Relationship between Moral Intelligence and Emotional Intelligence with Ethical Behavior]. *Ethics Sci Technol*. 2018;**13**(2):167-75. Persian.
- Schmitt CA, Schiffman R. Perceived needs and coping resources of newly hired nurses. *SAGE Open Med*. 2019;**7**. [PubMed ID: [30828452](#)]. [PubMed Central ID: [PMC6390210](#)]. <https://doi.org/10.1177/2050312119833216>.
- Hosseini D, Khavidi A, Heikalabadi Z. [Investgating the Status of the Emotional Intelligence and Stewardship of High-school Managers of Tabriz]. *Women and Family Studies*. 2009;**2**(6):51-65. Persian.
- Esmaeilpourzanjani S, Mashouf S, Khaki S. [Evaluation of Professional Ethics Observance in Nursing Practice from Nurses and Patients' Point of View in Shahid Beheshti University of Medical Sciences' Teaching Hospitals]. *Iran J Med Educ*. 2015;**15**:447-59. Persian.
- Mansoori B. [Standardization of the Sieber or Shiring Emotional Intelligence Questionnaire among Master's students of Tehran Universities (master's thesis)]. Tehran: Allameh Tabataba'i University; 2001. Persian.
- Ghaedamini M, Aliakbari F, Masoudi R, Deris F. [The Relationship Between Emotional Intelligence and Disaster Nursing Competence in Nurses Working in Shahrekord]. *J Clin Nurs Midwifery*. 2019;**7**(4):268-77. Persian.
- Barati Marnani A, Ghoorchiani F, Ghorgi HA, Khatami Firouzabadi AM, Haghani H, Gholdust Marandi F. *Observance of Nursing Ethics From the perspective of nurse and patient in a Teaching hospital in Tehran University of Medical Sciences: 1391*. 2016, [updated 2016-06-09]. Available from: <http://hdl.handle.net/20.500.12424/1259570>.
- Mohajjel-Aghdam A, Hassankhani H, Zamanzadeh V, Khameneh S, Moghaddam S. Knowledge and Performance about Nursing Ethic Codes from Nurses' and Patients' Perspective in Tabriz Teaching Hospitals, Iran. *J Caring Sci*. 2013;**2**(3):219-27. [PubMed ID: [25276730](#)]. [PubMed Central ID: [PMC4134161](#)]. <https://doi.org/10.5681/jcs.2013.027>.
- Mohajjel Aghdam A, Hassankhani H, Zamanzadeh V, Khameneh S, Moghaddam S. [Nurses' Performance on Iranian Nursing Code of Ethics from Patients' Perspective]. *Iran J Nurs*. 2013;**26**(84):1-11. Persian.

27. Austin EJ, Saklofske DH, Egan V. Personality, well-being and health correlates of trait emotional intelligence. *Pers Individ Differ*. 2005;**38**(3):547-58. <https://doi.org/10.1016/j.paid.2004.05.009>.
28. Khan S, Khan T, Ansari MI, Ansari MI, Aslam S. Assessment of emotional intelligence among staff nurses of tertiary care hospitals of Karachi, Pakistan. *J Univ Med Dent Coll*. 2018;**9**(1):20-5.
29. Hosseinzadegan F, Shahbaz A, Shahbaz E. [The principles of professional ethics and its relationship with demographic characteristics of nurses]. *Educ Ethics Nurs*. 2017;**6**(1-2):1-9. Persian.
30. Penticuff JH, Walden M. Influence of practice environment and nurse characteristics on perinatal nurses' responses to ethical dilemmas. *Nurs Res*. 2000;**49**(2):64-72. [PubMed ID: 10768582]. <https://doi.org/10.1097/00006199-200003000-00002>.
31. Peter EH, Macfarlane AV, O'Brien-Pallas LL. Analysis of the moral habitability of the nursing work environment. *J Adv Nurs*. 2004;**47**(4):356-64. [PubMed ID: 15271152]. <https://doi.org/10.1111/j.1365-2648.2004.03113.1.x>.