

Original Paper

# The Relationship Between Anger, Moral Distress, and Self-esteem in Nurses



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## ABSTRACT

**Introduction:** Due to stressful work conditions, nurses are constantly exposed to various emotions and stressors such as anger and moral distress that threaten their mental health. On the other hand, self-esteem is one of the personality traits essential for people's mental health and improving their performance.

**Objective:** The present study investigates the relationship between anger, moral distress, and self-esteem in nurses.

**Materials and Methods:** This analytical correlational study was conducted on nurses working in the hospitals affiliated with the non-profit organization of Mazandaran Social Security Insurance from August to November 2018. Two hundred nurses were selected for this study via stratified random sampling. The study data were collected using the Cooper-Smith self-esteem inventory, Hamric moral distress scale, and state-trait anger expression inventory. The collected data were analyzed using the Mann-Whitney and Kruskal-Wallis tests, and path analysis was used for testing the conceptual model.

**Results:** The Mean±SD age of the nurses was 36.24±5.37 years. The Mean±SD anger, self-esteem, and moral distress scores were 113.68±15.04, 26.61±3.49, and 65.66±35.88, respectively. The results of the path analysis model suggested an inverse causal relationship between self-esteem and moral distress ( $P<0.05$ ). This model also indicated a significant inverse relationship between self-esteem and anger ( $P=0.01$ ).

**Conclusion:** These results show the significant psychological interventions in controlling anger and promoting self-esteem and reducing moral distress among nurses.

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## Highlights

- Anger is one of the most critical and complex emotions in human life, expressed as a common reaction to failure and misbehavior.
- The experience of anger is associated with negative consequences like stress, physical illnesses, decreased well-being, and burnout.
- Self-esteem plays an essential role in the mental health of individuals and in controlling anger.

The nurses, as the ones responsible for the continuous clinical care of patients, are held legally and morally accountable for the quality of care.

- A significant inverse relationship was observed between the self-esteem variable and moral distress variable in the nurses.

## Plain Language Summary

Anger is one of the most critical and complex emotions in human life, expressed as a common reaction to failure and misbehavior. Self-esteem means positive attention to oneself, essential to maintaining one's mental and physical health. Given the nature of nursing and constantly interacting with patients and as members of a specialized team, the existence of self-esteem in nurses is vital. Nurses are also constantly exposed to various stressors, one of which is moral distress associated with different aspects of ethical issues. This study aimed to assess the relationship between anger, moral distress, and self-esteem in nurses. The conceptual model obtained from this study was assessed by path analysis. The causal association between self-esteem and anger trait variables among the nurses was inversely significant. On the other hand, a significant inverse relationship was observed between self-esteem and moral distress in the nurses.

## Introduction

**A**nger is one of the most natural and complex emotions in human life, often induced by people's reactions to external stimuli and affects a person's physical and mental health [1, 2]. Due to their sensitive and stressful job, nurses are in contact with various sorts of work stressors, leading to some behaviors such as anger and violence [3]. The nurses' anger is affected by the high workload, many hospitalized patients, interpersonal conflicts, and tolerating their patients' suffering [4]. The experience of anger is associated with negative consequences like stress, physical illnesses, decreased well-being, and burnout [1, 5]. In the Hojjati et al. study, the level of anger among the nurses of Golestan Social Security Hospitals (Iran) was reported in the moderate range [6]. In another study, approximately 18% of Korean nurses reported experiencing anger at their workplace [7].

It seems that self-esteem is one of the personality traits essential in the mental health of individuals and in controlling anger [8]. Given the nature of nursing and constantly interacting with patients and as members of a specialized team, self-esteem in nurses is vital [9, 10].

Results of the studies conducted in nursing revealed that the self-esteem of 46-55% of nurses is at an intermediate level [11, 12]. The study results confirm the negative correlation between self-esteem, stress, social intimacy, and job satisfaction. People with low self-esteem are easily under the negative effect of the factors and cannot properly react to external stressors [13, 14]. A study in Singapore showed that the nurses who were resilient to stressful situations had higher self-esteem [15]. In a study among Iranian nurses, there was a significant relationship between self-esteem and moral sensitivity [8].

The nurses, as the ones responsible for the continuous clinical care of patients, are held legally and morally accountable for the quality of care. The perception of ethics as a profound and complex process is a vital nursing action. One of the issues related to ethics is moral distress which is associated with various aspects of ethical issues [16, 17]. In many studies on Iranian female nurses, there was a moderate range of moral distress and a significant inverse correlation between moral distress and job satisfaction [18, 19]. Moral distress is a significant issue that threatens both job satisfaction and the ability of the nurses to carry out their typical tasks. Moral distress accompanies many physical, psychologi-

cal, and social effects such as digestive problems, palpitations, anger, guilt, depression, job dissatisfaction and burnout, and alcohol and drug use [20, 21].

It has been reported that a stressful working environment causes nurses to experience intense anger; also, nurses (with moral distress) perceive it as anger and dissatisfaction. Since personality traits such as self-esteem play an essential role in anger management [22], and also in the literature review, there are few studies in this area that assess the relationship between the above three variables, and this study was conducted to determine the relationship among anger, moral distress, and self-esteem in nurses.

## Materials and Methods

This analytical correlational study was conducted among the nurses working in the hospitals affiliated with the non-profit organization of Mazandaran Social Security Insurance in Iran from August to November 2018. Given that in this correlational study, the structural equation modeling (SEM) method is used, a review of research texts shows that in using the SEM method, there is no precise strategy for determining the sample size of a structure. Since the most common method in using the SEM method is to estimate the maximum probability, the sample size of 200 people is an acceptable number [23]. Two hundred nurses were selected via the stratified random sampling method in this study. The study population included nurses in the emergency, internal medicine, gynecology, neonatal, pediatric, and intensive care units.

The study inclusion criteria were academic qualification, bachelor of science (BS) in Nursing, Master of Science (MS) in Nursing, willingness to take part in the study, and at least two years of clinical experience in the hospital. The study data were collected using the demographics form, the Cooper-Smith self-esteem inventory, the Hamric moral distress scale, and the state-trait anger expression inventory.

The collected demographic data included age, gender, marital status, education, nursing experience, employment status, residence (urban or rural), job position, main work shift, economic status, the support level received by the spouse, family, colleagues, and department officials in the current job, and a sense of job security.

Hamric moral distress scale consists of 21 items that examine the frequency and severity of moral distress [24]. In this study, the psychometric version of this tool in Persian was used. Each part is scored based on a 4-point scale, ranging from 0="never" to 4="very frequently" for the frequency of moral distress and from 0="none" to 4="high" for the intensity of moral distress. Each item is scored by combining the frequency of moral distress multiplied by its intensity from 0 to 16. The total score ranges from 0 to 336. A higher score indicates high moral distress, and a lower score means low moral distress. The moral distress scale includes "lack of professional competence at work," "ignoring ethical issues and patient conditions," "futile care," "following the physician's instructions without questioning and unsafe care," and "providing care under personal and organizational pressure" [21].

The Cooper-Smith self-esteem inventory (SEI) consists of 58 items to describe an individual's beliefs or reactions. This inventory was designed to measure self-efficacy in the social, family, professional, and personal areas. This inventory consists of general, social, familial, and occupational subscales. In this inventory, the subject is due to answer the options by choosing "Yes" or "No." The score given to each item is 1 or 0. In some items, the answer "Yes" is scored 1, the answer "No" is scored 0, and the rest of the items are scored inversely. A score  $\leq 23$  indicates low self-esteem, 23-27 moderate self-esteem, and greater than or equal to 44 as high self-esteem [25, 26]. In this study, the psychometric version of this tool was used in Farsi [27].

State-Trait anger expression inventory, designed by Spielberg in 1999, is used to assess anger. The 57-item inventory includes the state anger scale, trait anger scale, anger expression, and anger control scales. The state anger scale assesses the intensity of anger and includes three subscales of feeling angry, state anger/verbal, and state anger/physical. The trait anger scale measures how often angry feelings are experienced over time and includes two subscales: angry trait and angry reaction. The anger expression and anger control scales assess four relatively independent anger-related traits: angry feelings toward other persons or objects in the environment (anger expression-out), suppressing angry feelings (anger expression-in), preventing the expression of anger toward other persons or objects in the environment (anger control-out), and controlling suppressed angry feelings (anger control-in). The items are scored based on a 4-point Likert scale. For the first part items, the subjects are asked to answer using the 4-point scale from 1="not at all" to 4="very much." The

items of the second and third parts are scored from 1 (hardly ever) to 4 (almost always) [28]. The total score ranges from 0 to 96. In this study, the psychometric version of this tool was used in Farsi [29].

After collecting the completed questionnaires, the data were analyzed in SPSS version 18. The descriptive statistics, including the mean and the standard deviation, and inferential statistics, such as the Mann-Whitney, and Kruskal-Wallis tests, were used to describe the study samples. The conceptual model obtained from the research background of this study was tested by path analysis. The generalized least squares method was used to estimate the path coefficients and the convergence of the concept model. The data were prepared for path analysis in SPSS v. 18. The statistical analysis of the path analysis method was performed in Amos v. 22. The *P* of less than 0.05 was also considered significant.

## Results

The study consisted of 200 participating nurses whose mean age was  $36.24 \pm 5.37$  years with a work record of  $11.51 \pm 5.47$  years. About 76% of these nurses were working on rotating shifts, and 90.5% had a BS degree. The participants' demographics are presented in Table 1. The present research findings suggested that the mean scores of angers, self-esteem, and moral distress were  $113.68 \pm 15.04$ ,  $26.61 \pm 3.49$ , and  $65.66 \pm 35.88$ , respectively. In the following, the Mean  $\pm$  SD scores of anger, self-esteem, and moral distress were compared in relation to the variables of gender, economic status, the nurse in charge's cooperation, job security, support from colleagues, and support from the authorities, and the results are given in Table 2.

Table 3 presents the results from the path analysis model for analyzing the causal relationship among self-esteem components, anger trait dimensions, and moral distress components. Figure 1 demonstrates the relationships between the observed variables and the latent variables of the conceptual model. The standard factor loading between the self-esteem components was estimated as 0.23 for the general, 0.37 for social, 0.01 for family, and -0.19 for job aspects. Out of these components, only the social aspect was significant ( $P=0.01$ ). No significant relationship was found between other components of self-esteem with this variable at 0.05 level. Regarding the aspects of the anger trait variable, the standardized level of factor loading was obtained as 0.81 for the feeling of anger, 0.98 for verbally expressing anger, 0.95 for physically

expressing anger, 0.78 for angry mood, 0.62 for angry reaction, 0.52 for anger expression-out, 0.12 for anger expression-in, -0.78 for controlling anger outburst (anger-control out), and ultimately, -0.74 for controlling anger intrusion (anger-control in) that except for anger intrusion, all components came up with a significant association with the latent variable of anger trait at  $P=0.001$ .

The results from analyzing the relationship between the latent variable of moral distress and its extracted components revealed that the standard factor loading was calculated as 0.56 for lack of professional competency, 0.68 for ignoring moral issues, 0.62 for ineffective care, 0.63 for following the physician's instructions without questioning, and 0.58 for providing care under pressure. The mentioned results indicate that all dimensions of the moral distress variable had a direct relationship with this variable, so each of these relationships was significant at  $P=0.001$ .

The correlation between self-esteem and anger trait variables among the nurses was inversely significant at  $P=0.01$ . Thus, considering the robust evidence showing the relationship between the self-esteem aspects and anger trait components, increasing nurses' self-esteem may reduce their anger trait, and its standardized weight on anger trait was -0.85 (Table 3). On the other hand, an inverse relationship was observed between the self-esteem variable and moral distress variable in the nurses. This relationship is significant at  $P<0.05$  and was estimated as the standard level of -0.16. It means that each unit of increase in the nurses' self-esteem can lower their moral distress by the standard level of 0.16, while no critical relationship gained between anger and moral distress with the presence of the moderating role of self-esteem at 0.05 level.

The goodness of fit index for the conceptual model was 0.849, that regarding its range of 0.5-1, indicates the relatively appropriate conceptual model employed in the confirmatory factor analysis. Moreover, the root mean square error of approximation (RMSEA) for this model was 0.087, which for its proximity to the standard limit lower than 0.09, it is considered marginally acceptable, which shows confidence in the results. Other indicators of the model were also acceptable (Table 4).

**Table 1.** Demographic information of the participants (n=200)

Variables		No. (%)
Gender	Male	42(21)
	Female	158(79)
Age (y)	20-30	43(21.5)
	31-40	89(44.5)
	41-50	68(34)
Marital status	Single	19(9.5)
	Married	175(87.5)
	Divorced	6(3)
Level of education	Bachelor of science	181(90.5)
	Master of science	19(9.5)
Shift work	Daytime shifts only (morning & evening)	45(22.5)
	Permanent night shifts	3(1.5)
	Internal rotation (mix of night and day shifts)	152(76)
Position in the ward	Nurse	171(85.5)
	Responsible nurse	4(2)
	Head nurse	13(6.5)
	Supervisor	12(6)
Type of employment	Formal	151(75.5)
	Contractual	49(24.5)
Economic status	Very low	14(7)
	Low	13(6.5)
	Average	129(64.5)
	Good	44(22)
Superior nurse support	Very little	19(9.5)
	Little	54(27)
	Much	116(58)
	Very much	11(5.5)
Job security	Very little	40(20)
	Little	96(48)
	Much	62(31)
	Very much	2(1)

Variables		No. (%)
Colleagues support	Very little	22(11)
	Little	76(38))
	Much	94(47)
	Very much	8(4)
Official support	Very little	44(22)
	Little	81(40.5)
	Much	69(34.5)
	Very much	6(3)

**Table 2.** Relationship of demographic variables with anger, self-esteem and moral distress of nurses

Variable		Anger		Self-esteem		Moral Distress	
		Mean±SD	P	Mean±SD	P	Mean±SD	P
Gender	Male	117.68±21.31	0.227*	31.06±3.09	0.817*	63.45±35.05	0.040*
	Female	112.45±12.74		30.96±3.51		66.25±35.81	
Economic status	Very low	118.29±29.37	0.745**	25.00±3.82	0.051**	47.36±22.69	0.001**
	Low	117.92±20.26		22.46±4.78		57.54±21.45	
	Average	113.17±12.35		27.10±2.88		69.80±33.07	
	Good	112.43±14.22		26.90±3.76		61.75±37.24	
Superior nurse support	Very little	120.16±23.16	0.006**	24.15±4.78	0.019**	62.00±35.68	0.92**
	Little	118.76±17.37		25.92±3.97		66.93±39.44	
	Much	110.79±10.70		27.32±2.69		65.56±35.13	
	Very much	107.91±16.23		26.72±3.78		66.82±29.31	
Job security	Very little	120.53±21.71	0.016**	25.32±4.40	0.047**	68.65±40.79	0.914**
	Little	112.67±11.06		26.69±3.31		64.04±32.33	
	Much	110.91±14.10		27.29±2.92		66.22±38.09	
Colleagues support	Very little	115.41±23.67	0.040**	25.77±4.62	0.651**	60.77±35.52	0.415**
	Little	115.96±15.04		26.51±3.51		70.76±37.39	
	Much	111.60±13.31		26.87±3.20		62.91±34.70	
Official support	Very little	119.66±19.71	0.002**	26.06±4.01	0.343**	69.23±37.76	0.85**
	Little	114.01±13.51		26.34±3.83		65.96±35.16	
	Much	109.80±12.17		27.22±2.64		63.24±35.83	

\*The Mann–Whitney U test, \*\*The Kruskal–Wallis test.

**Table 3.** Relationship between anger subscales, self-esteem subscales, and moral distress dimensions based on structural equation model

Latent Variables	Observed Variables	Coefficient	Standard Coefficient	Standard Deviation	P	R <sup>2</sup>
Anger	Feeling angry	1.650	0.807	0.138	0.001	0.651
	State anger/verbal	1.986	0.975	0.160	0.001	0.951
	State anger/physical	1.729	0.953	0.156	0.001	0.908
	Angry trait	1.000	0.775	--	-	0.601
	Angry reaction	1.069	0.619	0.104	0.001	0.383
	Anger expression-out	0.989	0.521	0.125	0.001	0.271
	Anger expression-in	0.206	0.120	0.138	0.136	0.014
	Anger-control out	-1.360	-0.783	0.175	0.001	0.613
Self-esteem	Anger-control in	-1.350	-0.736	0.177	0.001	0.542
	General	1.000	0.228	-	-	0.052
	Social	0.866	0.368	0.339	0.01	0.135
	Familial	0.011	0.006	0.149	0.940	0.000
Moral distress	Occupational	-0.378	-0.186	0.196	0.054	0.035
	Professional incompetence	1.048	0.562	0.161	0.001	0.315
	Ignoring ethical issues	0.852	0.677	0.122	0.001	0.458
	Futile care	1.193	0.621	0.189	0.001	0.386
	Perform physician's instructions without question	0.980	0.628	0.152	0.001	0.395
Self-esteem	Provide care under pressure	1.000	0.582	-	-	0.339
	Anger	-2.386	-0.851	1.358	0.01	0.724
	Moral distress	-0.403	0.155	0.276	0.05	0.024
Anger	Moral distress	0.046	0.050	0.437	0.916	0.020

## Discussion

The results of the path analysis model suggested the inverse causal relationship between self-esteem and moral distress variables among the nurses. Also, an inverse causal relationship was found between self-esteem and anger trait variables in the nurses, while no significant relationship was spotted between anger and moral distress with the moderating role of self-esteem.

Results of a study on college students suggested a significant positive association between the variables, namely, self-esteem, problem-solving, and the distress induced in the coping strategies of anger. No relationship was discovered between self-esteem and other an-

ger coping strategies [30]. The above study results are compatible with those of the present research. Self-esteem is the main and fundamental factor in socio-affective compatibility and influences all levels of life, such as an individual's activities. If the need for self-esteem is not satisfied, the higher needs such as progress and understanding will remain restricted, and the symptoms like depression, anorexia nervosa, anxiety, violence, belligerent behaviors, and psychosocial withdrawal will emerge [31]. Individuals with high self-esteem often display better performance, while those with lower self-esteem may perform poorly for the challenge. The nurses with poor self-esteem easily come up with adverse reactions when facing failures, negative events, and psychosocial risk factors, including high workload, lack of



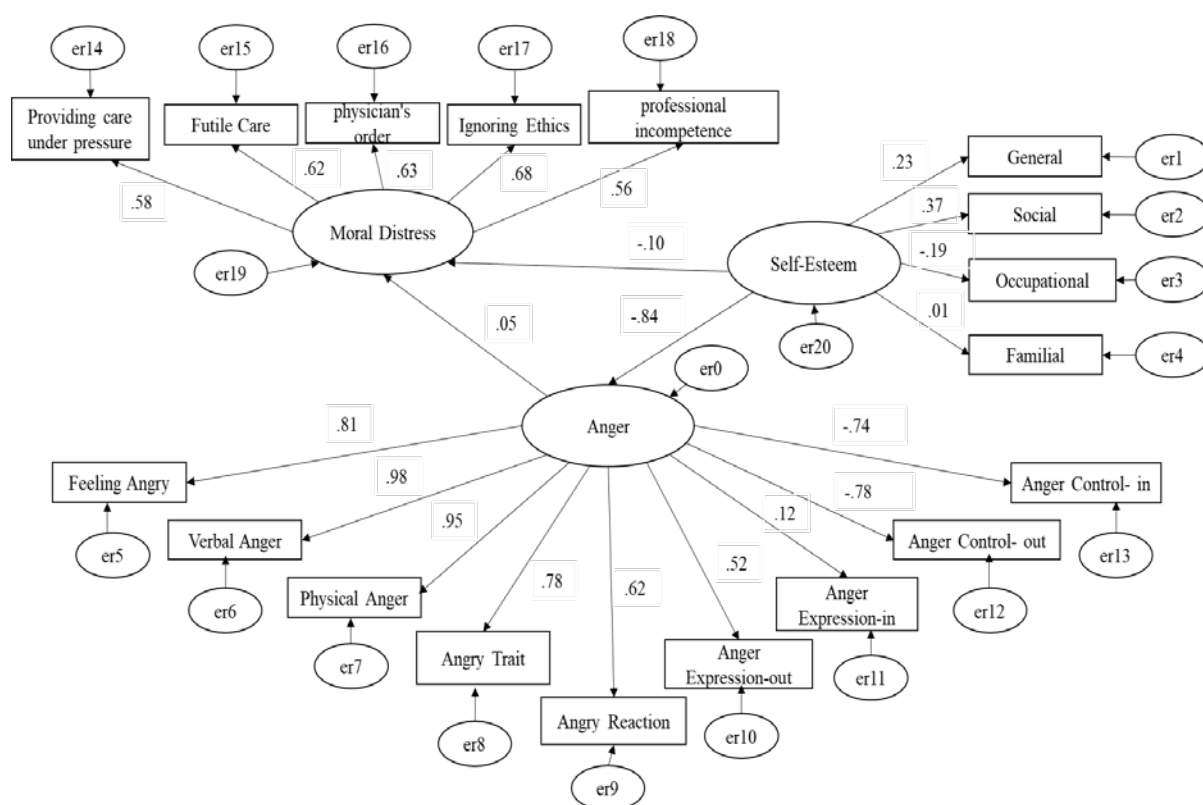
**Table 4.** Structural equation model indicators

Indicator	Criteria Limits	Estimated Values
The goodness of fit index (GFI)	0.9	0.849
Adjusted goodness of fit index (AGFI)	0.9	0.806
Parsimony goodness of fit index (PGFI)	0.9	0.777
Root mean square error of approximation (RMSEA)	0.09	0.087
$\chi^2/df$	1<3	2.625
Akaike information criterion (AIC)	-	466.645
Bayesian information criterion (BIC)	-	605.969
The brown-cudeck criterion (BCC)	-	472.013
Corrected akaike's information criterion (CAIC)	-	643.969

support, patients' deaths and their families' mourning, working in highly stressful wards and the patients suffering from chronic diseases and cancers [32].

In the current research, no significant association was seen between marital status and education and anger's total score, while in a study conducted in Turkey, the health personnel's age, marital status and education, and

levels of anger and controlling anger showed a significant relationship, which is inconsistent with the present research results [33]. Based on the demographic variables, the difference in anger-related findings may result from the cultural differences in the society, the difference of the study community, and the study sample size.

**Figure 1.** Relationships between anger, moral distress, and self-esteem in the conceptual model



Moreover, the present study findings did not indicate a critical relationship between the total score of self-esteem and education, which is incongruent with those found by the study of Van Eckert et al. [13], performed in the Nursing Association of Germany. The difference between the present study results and Van Eckert's research can be due to the cultural differences and the atmosphere dominating the hospitals. For other reasons, we can mention diverse statistics on the nurses' self-esteem in various countries, the hospital ward type, the definition of self-esteem used in the study, and various standards and strategies in different countries.

In another study, the moral distress in the majority of the nurses in both aspects of intensity and frequency was at a moderate level [34], and the results of our study are consistent with this finding. Besides, the results of Ulrich's study in the US denoted that 5 remarkable and stressful moral issues about caring for patients include the patient's rights and autonomy, informed consent to treatment, the personnel's patterns, advanced care program, and alternative decision makings. Young nurses and those with less work experience faced more moral issues and reported higher moral stress levels. In addition, the nurses from different areas usually experienced a particular sort of moral nuisance [35]. The current study results displayed that the more the nurses feel angry, the less their self-esteem gets. Self-esteem is, in fact, the individual's awareness and attitude towards their values and competencies and of the determinants in the nurses' behavior. Angry nurses have poor self-esteem, and this issue can bring about various work failures.

The present study population comprised the nurses working in hospitals affiliated with the non-profit organization of Social Security Insurance in Mazandaran Province, Iran, and did not include the nurses working in the governmental centers. Therefore, the generalization of results should be made with caution. Also, nurses' psychological and personality traits, as well as family and social support of nurses, can affect their anger, moral distress, and self-esteem, which were not examined in this study. It is suggested that future studies also consider the personality traits and family and social support of nurses that affect nurses' self-confidence.

Nurses are exposed to different kinds of violence due to their presence in a stressful work environment. The verbal violence by patients and their families may anger them or affect the quality of nursing care. Based on the study results and the critical role of personality traits such as self-esteem in reducing nurses' anger and

moral distress, nursing managers (including supervisors, head nurses, etc.) are recommended to pay attention to these issues and conduct appropriate psychological interventions to increase nurses' self-esteem and reduce their negative emotions.

## Ethical Considerations

### Compliance with ethical guidelines

This study was approved by the Ethics Committee of Mazandaran University of Medical Sciences (Code: IR.MAZUMS.REC.1397.248). Informed consent was obtained from all study participants, and the information about the research objectives, how to conduct the research, and how to complete the questionnaires was briefly explained to them. They were assured that their information would be confidential and used for research purposes.

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### Authors' contributions

Conceptualization and methodology: Yadollah Jannati, Vida Shafipour, and Samae Shamshiri; Writing the original draft: Tahereh Heidari; Data collection: Samae Shamshiri; Data analysis: Seyed Nouraddin Mousavinasab and Tahereh Heidari; Final confirmation: All authors.

### Conflict of interest

The authors declared no conflict of interest.

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