Relationship between ICU nurses’ moral distress with burnout and anticipated turnover

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Abstract

Background: Moral distress is one of intensive care unit nurses’ major problems, which may happen due to various reasons, and has several consequences. Due to various moral distress outcomes in intensive care unit nurses, and their impact on nurses’ personal and professional practice, recognizing moral distress is very important.

Research objective: The aim of this study was to determine correlation between moral distress with burnout and anticipated turnover in intensive care unit nurses.

Research design: This study is a descriptive-correlation research.

Participants and research context: A total of 159 intensive care unit nurses were selected from medical sciences universities in Iran. Data collection instruments included “demographic questionnaire,” “ICU Nurses’ Moral Distress Scale,” “Copenhagen Burnout Inventory” and “Hinshaw and Atwood Turnover Scale.” Data analysis was done by using SPSS19.

Ethical considerations: Informed consent from samples and research approval was obtained from Shahid Beheshti Medical Sciences University Research Ethics Board in Tehran.

Findings: The findings showed intensive care unit nurses’ moral distress and anticipated turnover was high, but burnout was moderate. The results revealed that there was a positive statistical correlation between intensive care unit nurses’ age, their work experience and the fraction of nurses’ number to number of intensive care unit beds with their moral distress and burnout. However, there were no correlation between gender, marriage status, educational degree and work shift and moral distress.

Discussion: Some of the findings of this research are consistent with other studies and some of them are inconsistent.

Conclusion: Similarly, moral distress with burnout and anticipated turnover did not have statistical correlation. However, a positive correlation was found between burnout and anticipated turnover. The results showed that increase in the recruitment of young nurses, and nursing personnel, and diminishing intensive care unit nurses’ moral distress, burnout and their turnover intention are essential.

Keywords
Burnout, intensive care unit, moral distress, nurse, turnover
Introduction

Nurses are faced with moral distress because of their professional status and role.1,2 A variety of factors can lead to moral distress that nurses deal with in daily activities.3–8 Regardless of the shortage of nurses,9 the causes of maximum moral distress in intensive care unit (ICU) nurses include aggressive treatment of patients facing death, cheating in examinations, incomplete and inadequate treatment by the staff, unfair distribution of power among colleagues, and lack of organizational support.10 Corley,9 in her study, mentions pain and suffering caused by invasive diagnostic and therapeutic treatments, curing patients to fulfill organizational requirements, prolonging death period without consent of patients and their families, and budget deficits as causes of moral distress in nurses.

Like other nurses, ICU nurses are faced with moral distress.11 The reasons of moral distress are refusal or avoidance of ICU patients with poor prognosis,12 futile treatment,13 the use of advanced technology, high cost of hospitalization and the risk of sudden death,12 conflict between organizational commitment and dedication to patients, and contradiction between doctors and nurses.14,15

Moral distress affects individuals’ physical, mental, and spiritual aspects and also their social relations.15 Moral distress causes feelings of frustration and guilt, anger,16 job dissatisfaction, stress, quitting job,17,18 sadness, anxiety, shame, low self-esteem, exhaustion, insecurity, fear, and depression in nurses and impacts their performance.19,20 Moral distress can also lead to nurses’ burnout and anticipated turnover.21

Studies showed conflicting results regarding the moral distress between burnout and intention to leave in nurses.6,22–25 The available research on moral distress in Iran was focused primarily on job satisfaction, ethical climate, burnout, and role stress. In the majority of the studies, nurses from psychiatric units, emergency departments, and coronary care units and medical–surgical units were sampled. No research studies involving Iranian ICU nurses were found about correlation between moral distress with burnout and turnover in the exhaustive literature search. Therefore, this study was based on a model theory for moral distress.9

Background

Nurses in Iran, like in many other developing countries, face many challenges in their workplaces when performing their duties.26 These challenges are mostly due to the nursing shortage, job dissatisfaction, low social status of nurses, the gap between the theory and practice of community-based care, the lack of an adequate system of student intake, and shortages in the nursing educational curricula.26,27 These challenges affect quality nursing care delivery because they lead to increased workload and wrong actions.26,28 Wrong actions can lead to moral distress for nurses.28

In Iran, undergraduate nursing students should pass 135 units, including 26 basic sciences course units, 20 general course units, and 89 specialized course units to gain a bachelor’s degree. A course on nursing history, development, and ethics equivalent to one course unit was offered until 1983, and then upon revision of the curriculum, a separate course under this title was eliminated in 1995; however, issues on nursing ethics were included in all specialized courses. Curricula in most nurse faculties in Iran have put less emphasis on the aspect of moral distress; thus students graduate with little knowledge of the phenomenon. For example, nursing ethics is taught during early days of the student nurse-training program, but it is not enough. The curriculum mainly focuses on the principles of ethics, while the course content puts more emphasis on how to manage patients’ stress without adequately addressing the issue of nurses’ moral distress. These factors have implications for the understanding and application of ethics to nursing practice and decision making. Most nurses are not confident with their ethical and moral decision-making skills; consequently, they are prone to suffer from moral distress. There are no ethics committees in Iran’s hospitals. Thus, the nurses cannot solve the ethical problems in these committees. Therefore, there is not any suitable context in hospitals for practical training about ethical issues and problems. Despite this emphasis and due
to the fact that a successful training depends on various factors, including qualification of the instructors, content of the texts, teaching method, individual backgrounds of students, and methods of evaluation of professional ethics, the extent of success in learning the ethical topics differs at various faculties.\textsuperscript{26,29}

An efficient nursing care system can be attained when nurses are able to handle or solve ethical issues competently, but there is a lack of ethics program in the nursing curriculum, especially in BSc degree. As the students, after graduating, will work in a hospital, they cannot handle ethical problems, properly, so they face moral distress.\textsuperscript{26,30,31}

Moral distress is defined as the psychological disequilibrium and negative feeling state experienced when one makes a moral decision but does not implement it or do the right thing because of other constraints.\textsuperscript{24,32–36} Some of the studies revealed that Iranian nurses’ moral distress was moderate to severe\textsuperscript{37–39} Moral distress can lead to nurses’ burnout and make them quit their job.\textsuperscript{40}

Burnout is the degree of physical and psychological fatigue and exhaustion experienced by the person.\textsuperscript{41} Burnout refers to loss of energy, which usually happens when persons feel “burned,” in both physical and psychological terms.\textsuperscript{42} There are a number of studies on burnout in Iran, and most of them focused on nurses, psychologists, and occupational therapists.\textsuperscript{43–45} The results from burnout in hospital nurses: a comparison of internal, surgery, psychiatry, and burns wards revealed that nurses of psychiatry wards showed significantly higher levels of emotional exhaustion and depersonalization in comparison with nurses working in other wards, and burns wards nurses showed significantly higher levels of personal accomplishment. Also, nurses who were single were more emotionally exhausted.\textsuperscript{43}

Results of some studies suggested a positive correlation between moral distress and burnout,\textsuperscript{36,46} and some of the factors.\textsuperscript{47} Burnout outcomes are dangerous not only for the person who experiences it but also for others, such as care recipients, colleagues, and family members. Therefore, it is essential to understand the factors affecting on burnout.\textsuperscript{36} Burnout is related to negative workplace conditions.\textsuperscript{48} Workplace stress and burnout are found more frequently according to specialty/nature of work.\textsuperscript{49–53} Tourangeau and Cranley\textsuperscript{54} found that age, organizational commitment, job satisfaction, and work group cohesion were significant predictors of intent to remain. They found no evidence of a direct relationship between either manager ability and support or burnout with intention to remain in workplace.

Turnover decreased the number of nurses and diminished quality of nursing care,\textsuperscript{55} and it can affect patients.\textsuperscript{9} Corley et al.\textsuperscript{21} reported that 15% nurses quit their work because of moral distress, but in Nathaniel’s\textsuperscript{56} study, 43% nurses quit their work.

Various research have been carried out regarding correlation between moral distress and other variables. Some studies showed a positive correlation between moral distress and turnover.\textsuperscript{23,57} Maningo-Salinas\textsuperscript{22} reported a positive correlation between moral distress with turnover and negative correlation between perceived social support with turnover. She found that the number of years of experience as a registered nurse had a statistical significance when compared to anticipated turnover.\textsuperscript{22} Better understanding of the contributing factors to high levels of moral distress might facilitate the development of educational programs, specific support methods, and organizational structures for the ethical practices of nurses and reduce the likelihood of nurses leaving positions, specialties, or the profession of nursing. Understanding the interactions of these three variables should result in increasing the collective knowledge of the profession of nursing and its workforce issues.

The study

Aims

The purpose of this research was to identify the relationship between moral distress, burnout, and anticipated turnover in a population of ICU nurses in Iran.
Method

This research is a descriptive-correlation study. Three variables (moral distress, burnout, and anticipated turnover) were investigated using the Iranian ICU Nurses’ Moral Distress Scale (IMDS), the Copenhagen Burnout Inventory (CBI), and the Anticipated Turnover Scale (ATS), respectively. The questionnaire survey was administered to participants between September 2011 and January 2012. The main study was preceded by a pilot study with a primary goal to check whether the research instruments are intelligible. It was conducted among ICU nurses (n = 20). It showed no problems with understanding of the procedure and instruments; therefore, no modification of the study design was needed. As a result, the pilot group was included into the main study group.

Participants

The questionnaire survey was sent to 180 ICU nurses working in 12 academic hospitals in Iran. A total of 159 ICU nurses (88%) responded to the questionnaire. Demographic details of the study participants are shown in Table 1.

Instruments

The questionnaire comprised the “Iranian IMDS,” “CBI” and “Hinshaw and Atwood ATS,” and demographic questions.

Table 1. Demographic data of the study participants (N = 159).

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n (%)</th>
<th>Years: mean ± SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>44 (27.7)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>115 (72.3)</td>
<td></td>
</tr>
<tr>
<td>Nurse’s educational level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BSN</td>
<td>152 (95.6)</td>
<td></td>
</tr>
<tr>
<td>MSN</td>
<td>7 (4.4)</td>
<td></td>
</tr>
<tr>
<td>Type of employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Official</td>
<td>55 (34.6)</td>
<td></td>
</tr>
<tr>
<td>Contractory</td>
<td>22 (13.8)</td>
<td></td>
</tr>
<tr>
<td>Agreemental</td>
<td>72 (45.3)</td>
<td></td>
</tr>
<tr>
<td>Human resources</td>
<td>10 (6.3)</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>33.4 ± 5.7</td>
<td></td>
</tr>
<tr>
<td>Nursing experience</td>
<td>9.2 ± 5.6</td>
<td></td>
</tr>
<tr>
<td>ICU nursing experience</td>
<td>7 ± 4.6</td>
<td></td>
</tr>
<tr>
<td>Shift</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morning</td>
<td>14 (8.8)</td>
<td></td>
</tr>
<tr>
<td>Evening/night</td>
<td>1 (0.6)</td>
<td></td>
</tr>
<tr>
<td>Night</td>
<td>3 (1.9)</td>
<td></td>
</tr>
<tr>
<td>Long day</td>
<td>5 (3.1)</td>
<td></td>
</tr>
<tr>
<td>Proportion of nurse to patient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:1</td>
<td>34 (21.4)</td>
<td></td>
</tr>
<tr>
<td>1:2</td>
<td>52 (32.7)</td>
<td></td>
</tr>
<tr>
<td>1:3</td>
<td>73 (45.9)</td>
<td></td>
</tr>
</tbody>
</table>

SD: standard deviation; BSN: Bachelor of Science in Nursing; MSN: Master of Science in Nursing; ICU: intensive care unit.
For the demographic data, the participants were asked to state their gender, age, educational level, type of employment, shift type, years of nursing experience, and years of ICU nursing experience.

The Iranian IMDS is a 30-item scale measuring moral distress intensity. Current authors developed IMDS. Some of the items used in Corley’s Moral Distress Scale were not appropriate in ICU nurses in Iran. Therefore, IMDS was developed using the content analysis approach. The framework guiding the development of the IMDS included Jameton’s conceptualization of moral distress, House and Rizzo’s role conflict theory, and Rokeach’s value theory. Items for the IMDS were developed from research on the moral problems that nurses confront in hospital practice. Face and content validity (SCVI (scale-level content validity index) and ICVI (item-level content validity index)), construct validity, and convergent criterion validity for this scale were done. CVI (Content validity index) was measured on relevance, clarity, and simplicity of scale as 0.98, 0.95, and 0.96, respectively. ICVI of this scale was > 0.85. In construct validity, factor analysis yielded three factors: inappropriate competencies and responsibilities, errors, and not respecting the ethics principles. Three factors (10 items in first factor “inappropriate competencies and responsibilities,” 11 items in second factor “errors,” and 9 items in third factor “not respecting the ethics principles”) were detected. Corley’s Moral Distress Scale was used for convergent criterion validity. The Pearson correlation coefficient with r = 0.58 and p-value < 0.01 indicates a high correlation between the instruments. In order to examine the reliability, Cronbach’s z was used (z = 0.96). Using a Likert scale from 0 to 4, respondents were asked to rate moral distress intensity (ranging from “none” to “great extent”) for each item. The total score for each subscale was divided by the number of items for the subscale.

CBI was developed by Kristensen in 2004, and revised in 2005. It has three dimensions. Personal burnout dimension (6 items), client-related burnout (7 items), and work-related burnout (6 items). Scores for each dimension alone are to be calculated. The burnout scores in each of four categories (low = 0–25, moderate = 25–50, high = 50–75, and very high = 75–100) are classified. Higher scores for each dimension represent more burnout. Face and content validity for this inventory were done. CVI was 0.85–0.95 for items, and total inventory CVI was 0.90. Cronbach’s z for CBI dimensions was 0.76–0.92. The test–retest reliability coefficient was 0.86.

The self-report ATS instrument contains 12 items in Likert format, with five response options ranging from agree strongly to disagree strongly. Questions are related to one’s anticipated length of time before leaving and certainty of leaving the job. The ATS was originally developed in 1978 by Hinshaw and Atwood and was tested several times. Scoring of this scale is equal to 12–60. The score is the simple sum of all of the items in the scale divided by the number of items in the total scale (1 = never, 1–2 = low, 2–3 = moderate, 3–4 = high, and 4–5 = very high). A greater score reflects higher degree of turnover. CVI was 0.80–0.95 for items. Cronbach’s z = 0.85–0.94 in several researches, and in this research, z = 0.82. Test–retest reliability coefficient was 0.84 in 2 weeks’ interval.

Data collection

The bundles of questionnaires were distributed to the nurses by first author (F.A.S.). Each questionnaire contained explanatory details about the survey, and a reply envelope was supplied. The nurses were asked to place their responses into the reply envelopes. After 2 days, data concerning the hospitals themselves, such as the numbers of patients, wards, doctors, and nurses, were gathered from the head nurses.

Ethical considerations

Before administering the survey, research approval was obtained from Shahid Beheshti Medical Sciences University Research Ethics Board in Tehran (no. 7405). The participants were asked to answer voluntarily.
and anonymously. A documented informed consent was obtained. CBI and ATS were used with the kind permission of Dr Tage S. Kristensen and Dr Hinshaw and Dr Atwood, respectively.

Data analysis

The data were analyzed using SPSS v.19. Correlation analyses and t-tests were applied to examine the correlation of IMDS scores with the demographic data, CBI, and anticipated turnover scores. The scores obtained for the IMDS and each dimension score of the CBI were analyzed for correlations, and stepwise regression analyses were performed after gender and educational level were converted to dummy variables: women to 0 and men to 1; and Bachelor of Science in Nursing (BSN) to 0 and Master of Science in Nursing (MSN) to 1. Ratios of patients to nurses were calculated.

Results

The findings revealed mean score of IMDS was $2.08 \pm 0.98$: in “inappropriate competencies and responsibilities” dimension, it was $2.07 \pm 1.19$; in “errors” dimension, it was $2.29 \pm 1.10$; and “in not respecting the ethics principles” dimension, it was $1.83 \pm 1.23$. In addition, mean of personal burnout was $53.36 \pm 20.11$, work-related burnout was $45.50 \pm 18.03$, and client-related burnout was $44.89 \pm 23.07$. Mean score of ATS was $3.03 \pm 0.75$. Moral distress and anticipated turnover in ICU nurses was high, but their burnout was moderate. The findings revealed that female nurses’ moral distress in errors dimension was higher than male nurses’ moral distress (Table 2).

There were no correlation between type of employment, shift type and moral distress and its dimensions. While other demographic variables with the moral distress and some of its dimensions have statistically significant positive correlation, there was a positive correlation between age, years of nursing experience, years of ICU nursing experience, years of current ICU nursing experience, nurse-to-patient ratio, compulsory overtime work, and the workplace city with burnout ($p < 0.05$). But, there was only a positive correlation between years of ICU nursing experience and years of current ICU nursing experience with anticipated turnover ($p < 0.05$) (Table 3).

The finding revealed a positive correlation between age and years of nursing experience with moral distress ($p < 0.05$) and burnout ($p < 0.01$). A positive correlation was found between the nurse-to-patient ratio and moral distress and burnout ($p < 0.001$). Findings of this research showed a positive correlation between

### Table 2. Comparison of IMDS, CBI, and ATS scores by gender (N = 159).

<table>
<thead>
<tr>
<th>Gender variable</th>
<th>Male (n = 44), mean (SD)</th>
<th>Female (n = 115), mean (SD)</th>
<th>t</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMDS</td>
<td>1.29 (0.85)</td>
<td>2.14 (1.03)</td>
<td>1.26</td>
<td>0.21</td>
</tr>
<tr>
<td>Inappropriate competencies and responsibilities</td>
<td>2.99 (0.96)</td>
<td>2.10 (1.24)</td>
<td>0.52</td>
<td>0.60</td>
</tr>
<tr>
<td>Errors</td>
<td>2.01 (0.99)</td>
<td>2.39 (1.12)</td>
<td>2.14</td>
<td>0.03*</td>
</tr>
<tr>
<td>Not respect the ethics principles</td>
<td>1.73 (1.08)</td>
<td>1.87 (1.28)</td>
<td>0.60</td>
<td>0.55</td>
</tr>
<tr>
<td>Personal burnout</td>
<td>54.55 (23.89)</td>
<td>53.19 (18.57)</td>
<td>0.38</td>
<td>0.71</td>
</tr>
<tr>
<td>Work-related burnout</td>
<td>46.50 (20.44)</td>
<td>45.00 (17.09)</td>
<td>0.62</td>
<td>0.53</td>
</tr>
<tr>
<td>Client-related burnout</td>
<td>46.82 (25.66)</td>
<td>43.77 (22.02)</td>
<td>0.99</td>
<td>0.32</td>
</tr>
<tr>
<td>ATS</td>
<td>3.05 (0.71)</td>
<td>3.03 (0.77)</td>
<td>0.14</td>
<td>0.89</td>
</tr>
</tbody>
</table>

IMDS: ICU Nurses’ Moral Distress Scale; CBI: Copenhagen Burnout Inventory; ATS: Anticipated Turnover Scale; SD: standard deviation.
burnout and anticipated turnover (p < 0.05), but there was no significant correlation between moral distress and anticipated turnover (p > 0.05).

**Discussion**

In this study, ICU moral distress in “inappropriate competencies and responsibilities” and “errors” dimensions were high. However, moral distress in “not respecting the ethics principles” dimension was moderate. The highest moral distress was related to “errors” dimension. As this tool was used for the first time, researchers did not find any relevant studies that reported these moral distress dimensions. Other studies used Corley Moral Distress Scale. Moral distress in some studies was moderate, and in some studies, it was high. Half of the participating nurses in Solomons et al.’s study had moral distress, and one-third of participating nurses in Redman and Fry’s study experienced moral distress. Comparing the results of current research with other studies showed that moral distress in nurses was moderate to high. Therefore, it is necessary to consider moral distress.

In this study, burnout score in personal burnout dimension was high; in work-related burnout dimension and patient-related burnout dimension it was high. These findings are consistent with those of Wlodarczyk and Lazarewicz, and Kristensen et al., and Borritz et al. Therefore, it is necessary to use strategies for diminishing burnout.

The mean of anticipated turnover score in this research was 3.03 ± 0.75 (high), but in Liou’s study, anticipated turnover was moderate. In De Milt et al.’s study, 5.5% of nurses had anticipated turnover, whereas in Lützen et al.’s study, most of the nurses (71.42%) had anticipated turnover every day. Studies have shown a positive correlation between anticipated turnover and actual turnover. Considering that, the actual turnover intentions underlying turnover can be required to be considered by the appropriate authority in relation to measures to reduce ICU nurses’ intention to leave. Considering the actual intentions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Moral distress</th>
<th>Inappropriate competencies and responsibilities</th>
<th>Errors</th>
<th>Not respect the ethics principles</th>
<th>Personal burnout</th>
<th>Work-related burnout</th>
<th>Client-related burnout</th>
<th>Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.201*</td>
<td>0.180*</td>
<td>0.076</td>
<td>0.260**</td>
<td>0.227**</td>
<td>0.158*</td>
<td>0.217**</td>
<td>0.119</td>
</tr>
<tr>
<td>Gender</td>
<td>0.094</td>
<td>0.044</td>
<td>0.171*</td>
<td>0.031</td>
<td>0.003</td>
<td>0.065</td>
<td>0.064</td>
<td>0.004</td>
</tr>
<tr>
<td>Educational level</td>
<td>0.007</td>
<td>0.063</td>
<td>0.013</td>
<td>0.024</td>
<td>0.085</td>
<td>0.069</td>
<td>0.095</td>
<td>0.046</td>
</tr>
<tr>
<td>Years of nursing experience</td>
<td>0.186*</td>
<td>0.171*</td>
<td>0.080</td>
<td>0.223**</td>
<td>0.215**</td>
<td>0.176*</td>
<td>0.232**</td>
<td>0.140*</td>
</tr>
<tr>
<td>Years of ICU nursing experience</td>
<td>0.195*</td>
<td>0.171*</td>
<td>0.095</td>
<td>0.234**</td>
<td>0.367**</td>
<td>0.319**</td>
<td>0.318**</td>
<td>0.168*</td>
</tr>
<tr>
<td>Nurse-to-patient ratio</td>
<td>0.266**</td>
<td>0.181*</td>
<td>0.238**</td>
<td>0.255**</td>
<td>0.336**</td>
<td>0.232**</td>
<td>0.265**</td>
<td>0.032</td>
</tr>
<tr>
<td>Type of employment</td>
<td>0.007</td>
<td>0.004</td>
<td>0.061</td>
<td>0.043</td>
<td>0.066</td>
<td>0.077</td>
<td>0.030</td>
<td>0.139</td>
</tr>
<tr>
<td>Shift type</td>
<td>0.014</td>
<td>0.014</td>
<td>0.036</td>
<td>0.070</td>
<td>0.027</td>
<td>0.083</td>
<td>0.050</td>
<td>0.076</td>
</tr>
</tbody>
</table>

ICU: intensive care unit.
*p < 0.05; **p < 0.01.
underlying turnover, it is necessary for managers to think about measures to reduce ICU nurses’ anticipated turnover.

Findings of this study showed a positive correlation between gender and “errors” dimension (p < 0.05). In female nurses, the moral distress in “errors” dimension was higher than in male nurses. But there was no significant correlation between gender and moral distress in Joolae et al.’s study. Many studies using the work of Carol Gilligan and others have found gender differences in moral orientation. Perhaps the differences could be explained this way. This study partially supports Gilligan’s theory. It has been observed that cultural norms play an important role to make the men more assertive than women. Socialization patterns of both are different. It is expected that women should be submissive, introverted and caring as compared to men.

In the current research, there was no correlation between gender and burnout. However, a meta-analysis study conducted by Purvanova and Muros showed that women experienced emotional exhaustion and depersonalization more than men. The findings of this study were different from other studies. It could be due to differences in the instruments used.

In the present research, there was no correlation between gender and turnover. However, one study found that more men than women had anticipated turnover. Lack of correlation between gender and turnover intention in this study could be due to employment issues in Iran. Because finding a job is difficult for many people for different reasons, they do not usually quit their job. Since men are the head of household, if they withdraw from their jobs, they cannot afford the cost of living.

There was a positive correlation between age and moral distress (p < 0.05). This finding is consistent with those of Mobley et al. and Ulrich et al. However, these findings are not consistent with Corley et al.’s findings. Corley et al. found a negative correlation between age and moral distress. Perhaps the reason for positive correlation between age and moral distress is due to increase in the person’s experience to coping with moral problems. In addition, in Iranian nursing education programs, there is no nursing ethics course. The graduates of this profession do not know how to deal with ethical problems.

In this study, a positive correlation was found between age and burnout (p < 0.01). But, there was no correlation between age and turnover. This finding is inconsistent with finding of Ulrich et al.’s study. This difference may be caused by the population studied in Ulrich et al.’s research. Participants of the Ulrich et al. research were nurses and social workers in different wards of hospitals. In this study, the study population consisted of ICU nurses. The ICU nurses are not willing to leave their workplace because the workplace is specialized and because of their sense of autonomy compared with other wards. On the other hand, perhaps this difference is not due to re-employment of persons. It can be correlated with turnover intention.

This study showed a positive correlation between nurse-to-patient ratio with moral distress and burnout (p < 0.001). The higher the ratio, the greater the workload of nurses. Hart also concluded that the workload can explain 15.8% of the variance in intention to leave.

There was a positive correlation between nursing experience and ICU nursing experience with moral distress and burnout (p < 0.05). It means that older nurses experienced more moral distress. It may be due to increased person ethical sensitivity. This finding is consistent with Maningo-Salinas’ study. Elpern et al. reported that nurses with more experience showed more distress, although Wilkinson obtained the opposite result. Some nurses may become accustomed to moral distress as they gain experience, and some may suffer from cumulative distress. Further research on this aspect is required.

As expected, a significant correlation was demonstrated between moral distress and client burnout. This finding is consistent with some studies. Inadequate staffing imposes an excessive workload on nurses, and as a result, the quality of care would also be inadequate and well below nurses’ expectations. Burnout can lead to the intention to leave. Therefore, applying appropriate strategies to eliminate or reduce burnout and anticipated turnover is necessary.
In this research, there was no correlation between moral distress and anticipated turnover. This finding is inconsistent with findings of Fogel,23 Yeh and Yu,57 Maningo-Salinas,22 and Cummings.91 The findings in this study differed from those found in the literature about moral distress and anticipated turnover. A very challenging workplace should logically result in decreased tolerance for morally upsetting situations, even those ordinarily not very upsetting. It is possible that some of the variables such as interest to work in a specialized ward, organizational support, and ethical climate affect turnover. Further research on this aspect is required.

Since moral distress and burnout can affect nurses and nursing care quality, it is necessary to consider these. This study showed a positive correlation of age, nursing experience, and nurse-to-patient ratio with moral distress and burnout. This research suggests that maintaining nurse-to-patient ratio standards are required in ICUs. In this study, there was no correlation between moral distress with burnout and anticipated turnover. It is possible that some of the variables such as moral commitment, moral sensitivity, autonomy, ethical climate, and environmental support play the role of mediators in moral decision making, moral distress, and turnover. However, due to high moral distress and high anticipated turnover, and moderate burnout in ICU nurses, some interventions are essential to reduce moral distress, burnout, and anticipated turnover. Preventive solutions, including education, continuing education, and interventions in the work environment are greatly needed.

Furthermore, the relationships among these moral concepts are presented in the model given by Corley.9 Some of the relationships are complex and may be interactive. However, they can lead to either moral distress or moral intent to act. If knowledge, behavior, and attitudes lead to moral intent to act, taking the moral action will require some level of moral courage that leads to moral comfort. If nurses do not take moral action when they know that a moral problem is involved, they experience moral distress, with a potential subsequent impact on patients, nurses, and the hospital or healthcare organization.

Limitations
Although the nurses shared their answers with researchers, this study has several limitations. First, it was conducted in highly specialized units, and the findings cannot be generalized beyond the population surveyed. Second, affective response and satisfaction could be influenced daily events. Our findings may not apply to nonteaching hospitals. The authors suggest that such research be done in other units, nonacademic hospitals, and with other healthcare professionals in Iran.

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Conflict of interest
The authors declare that there is no conflict of interest.

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