**The relationship between Conscientiousness and moral distress in nurses** **of intensive care units**

**Abstract**

**Background:** Nurses in ICUs face a variety of ethical issues in which moral distress can be experienced. Nurses often refer to their conscience under moral distress conditions. Therefore, this study aimed to investigate the relationship between Conscientiousness and moral distress in nurses.

**Methods:** This was a correlational descriptive-analytic study which 310 nurses of intensive care units of Kerman, Iran were selected by the census method. Data were collected using Casta, Maccraye Conscientiousness Tool and Corley moral distress Scale. Data were analyzed by descriptive and analytical statistical tests in SPSS software version 15.

Results: the mean score of nurses' Conscientiousness was 40.82±6.70 and the highest level of conscientiousness was in the area of success orientation. The mean score of moral distress was 56.03±18.21 and the highest moral distress was in the aspect of errors. There was a significant negative relationship between the reliability aspect of conscientiousness and moral distress (p=0.008, R=-0.15). there was a significant statistical difference between conscientiousness and age, educational background, education, unit type, work experience, employment status, and marital status but moral distress varied only by unit type.

Conclusions: The results showed a significant and negative relationship between conscientiousness and moral distress. Strengthening nurses' conscientiousness plays an important role in controlling and reducing moral distress. Therefore, nurses can reduce their moral distress by strengthening their conscientiousness and, in turn, increase the quality of patient care.

Keyword: Conscientiousness, Moral distress, Nurses intensive care unit

**Introduction**

Moral distress is one of the major problems faced by nurses in intensive care units (5). In 1984, jameton used the phrase moral distress for the first time (2). Moral distress is a painful feeling or a condition of mental imbalance that occurs when nurses are aware of the appropriate moral action that can be taken depending on the situation but cannot do so due to obstacles present (3). Cases like continuing life support when it is not beneficial, lack of human resources, giving false hope to patients and their families and inappropriate care are some of the causes of moral distress in nurses (4). Internal limitations like personal shortcomings, lack of motivation, lowered self-confidence, incapability in solving moral dilemmas, feelings of weakness, self-doubt and lack of self-assertiveness can also contribute to moral distress in nurses (5). Moral distress in nurses might be followed by internal issues like loss of self-confidence or external ones like limiting communications with other healthcare employees (6). Additionally, moral distress in nurses can also affect patients and cause secondary health issues in them (7).

In times of moral distress, nurses usually refer to their conscience, in a way that their conscience prohibits them from taking certain actions and orders them to take other measures (3). When nurses can’t fulfill their responsibilities in caring for the patients and improving their health, they feel guilt and helplessness and become at odds with their conscience, causing them moral distress (4). Conscientiousness is an internal tendency of workers to do their job responsibilities at work, in a way that even without outside supervision, they fulfill their job duties fully and excellently without wasting resources (8). A sensitive conscience is needed to guide the nurse-patient relationship and do the ethical thing. Conscience has been understood as an incentive to provide high-quality care and limit inadequate care (9). In a study done by Kato in japan in 2013 with the aim of studying conscience in healthcare personnel, it was concluded that healthcare personnel refer to their conscience when faced with a tough ethical predicament (10). Considering moral distress has a high negative impact on the personal and professional aspects of a nurse’s life and reduces patient care quality, studying factors related to it is worthwhile. One of these factors is Conscientiousness; as such this study has been done with the intention of identifying the relation between conscientiousness and moral distress in nurses working in the intensive care units of teaching hospitals in Kerman, Iran.

Methods

This was a correlational study. The study population consisted of nurses that were selected by census method from ICU, CCU, and dialysis special units of hospitals under Kerman University of Medical Sciences. Based on the number of nurses in each hospital, nurses with the inclusion criteria were selected and entered the test. having a bachelor's degree in nursing was the criterion of inclusion for the participants. The data collection tool consisted of a three-part questionnaire: The first section included demographic information that examined characteristics of age, sex, educational background, educational degrees, work experience, work experience in special units, position at work, type of department, employment status, and marital status. The second consisted of a questionnaire of Conscientiousness. The Conscientiousness Questionnaire (WCQ) was designed in 1992 by Costa, MacCraye (11). Ajeei and his colleagues in 2010 evaluated this questionnaire according to Iranian culture (12). The questionnaire has 16 questions out of which 8 are questions (questions 1-8) related to the reliability subscale (for example, I am a very competent and efficient person) and 8 questions (questions 16-9), success orientation scale. (For example, I work hard to achieve my goals) (11).

Conscientiousness consists of two aspects of success orientation and reliability. Success orientation represents the effort people have for competence, efficiency, and success at work. The reliability aspect shows honesty, discipline, integrity, perseverance, diligence, and motivation to achieve one’s goals (13).

The questionnaire is a five-point Likert questionnaire that provides data as strongly agree (score 4), agree (score 3), disagree (score 2), disagree (score 1), and strongly disagree (score zero). (14). To get the general Conscientiousness score, the sum of all the statements is combined. For the Reliability subscale, the score of questions 1 to 8 and for the success orientation subscale, the scores of questions 9 to 16 are summed. Questions 1 -2 -4 -6 -9 -11 -13 are scored in reverse. The minimum possible score will be 0 and the maximum 64. a score between 0 and 21 means poor Conscientiousness. a Score between 21 and 32: Moderate Conscientiousness. A score above 32 is strong Conscientiousness (14).

This is a standard questionnaire and has been used in many studies. Gellatly and Irving (2001) reported a validity of 0.76 in their research on the role of conscientiousness in industry (15). Ejeey et al (2009) in their study of the interaction between personality and motivational styles in job performance, calculated this questionnaire’s Cronbach's alpha as 0.72 (12). Also, in the study of Alirezaie et al (2013) about the relationship between Conscientiousness and job performance of Isfahan municipality staff. The validity of this questionnaire was reported as 0.88 (14). In this study, Cronbach's alpha was calculated 0.63.

The third part of data collection was the Moral distress scale (MDS) developed by Corley in the year 1995 (7). And it has been psychometrically evaluated in the year 2010 (1). The questionnaire consists of 30 questions in three aspects: inappropriate allocation of responsibilities and competencies (questions 1 to 10), aspect of errors (questions 11 to 21), and non-compliance with ethical principles (questions 22 to 32) (16). The questionnaire is also classified according to the Likert scale into five options (none = zero, low = one, medium = two, high = three and very high = four). The scoring on this tool is zero to four on the Likert scale and, on the whole, zero to 120, and the moral distress score is obtained from the mean of the total score. The minimum possible score will be zero and the maximum is 120 (1).

In a study by Abbaszadeh et al. (2012), using Cronbach's alpha method, the reliability coefficient of the questionnaire was 93% and its validity by CVI was equal to 88% (17). In a study by Ebrahimi et al. (2013) using Cronbach's alpha method, its reliability coefficient was calculated to be 94% (7). This questionnaire was distributed to research environments after obtaining the necessary permits by research colleagues. Before distributing the questionnaires, verbal consent was obtained from the subjects and they were informed that the information in the questionnaire was anonymous and confidential and that all participants had complete freedom to enter and exit the study. In addition, during the process of completing the questionnaire, explanations for each question was given to the units under study. Nurses in CCU, ICU, and dialysis units completed the questionnaires at their place of work. Questionnaires were distributed among the nurses at the beginning of their shift and collected at the end of their shift. After collecting the questionnaires, eleven questionnaires were removed due to incomplete answering or missing sections, so the sample group was reduced to 310 persons. Collecting the Questionnaires took one month. The data was recorded in SPSS software version 24. And using descriptive statistics (mean, standard deviation, ...) and inferential statistics (Pearson correlation coefficient, independent t-test, and ANOVA) they were analyzed for the study and their significance level was considered P <0.05.

Results

Total 310 nurses participated in this study. minimum age of the participants was 22, and the maximum was 56, with a mean of 33.74±6.93. minimum work experience of the participants was one year, and the maximum, 27 years with a mean of 5.57±5.3. mean Conscientiousness score was almost average being 40.82±6.70. the highest mean score of an aspect of Conscientiousness belonged to the success orientation aspect with a mean of 21.22±4.93, and the lowest to the reliability aspect with a mean of 19.6±3.29.

The mean moral distress score was average and equal to 56.03±18.21. the highest mean score of an aspect of nurses’ moral distress belonged to the errors aspect being 24.42±8 and the lowest to the inappropriate assignment of responsibilities and qualifications with a mean of 15.56±7.06. there was a meaningful and negative statistical relationship between the Conscientiousness and moral distress in the reliability aspect with the Nonconformity to ethical principles and inappropriate assignment of responsibilities and qualifications aspects, and also between the reliability aspect and total moral distress in nurses (Table 1)

There was a meaningful and positive statistical relation Between the mean score of Conscientiousness and some demographic details such as age, educational degree, education, work experience, unit, hospital, employment situation and marital status (table 2)

There was only a statistically significant relationship between the mean score of moral distress and demographic characteristics in the unit type. The ICU staff had the highest mean score of moral distress(p=0.04).

Discussion

The results show that the mean score of conscientiousness in special unit nurses is almost average. But in a study by ghorbanzade et al (2013) on Conscientiousness level and related factors in nurses of the oncology section in Tabriz, they concluded that Iranian nurses had a high level of Conscientiousness (18). The difference of conscientiousness between these two studies can be attributed to them having had studied different populations in different settings and using different questionnaires. The mean score in success orientation was higher than the mean score in the reliability aspect of conscientiousness. Conscientiousness consists of two aspects: reliability and success orientation. Success orientation shows a person’s effort for being efficient and competent and to achieve success at work. The reliability aspect includes honesty, discipline, reliability, diligence, capability, perseverance and a person’s motivation to achieve success. A high success orientation score means that the study population is trying hard to succeed professionally.

The mean moral distress score of the nurses at special care units of the city was average. In accordance with this find, shooride et al (2013), reported the moral distress of nurses in special care units of Tehran as average (1). Karagozoglu et al (2017) reported the moral distress of nurses in special care units of Turkey’s hospitals as high (19). The difference in these finds can be attributed to different reasons such as difference in workload, working conditions, work environment, rules and regulations, and the nurse’s capabilities when faced with moral distress.

The highest mean scores of moral distress in nurses belonged to (in order): errors (errors and delays in diagnosis and treatment of patients and …), Nonconformity to ethical principles (lack of fairness between nurses and …) and inappropriate assignment of responsibilities and qualifications (incompetent personnel and …). Abbasi et al (2015) also showed that the distress caused by professional errors is higher than in other aspects (20). But shooride et al named insufficient and incomplete treatment of patients by personnel (inappropriate assignment of responsibilities and qualifications aspect) and unfair distribution of power between coworkers (Nonconformity to ethical principles aspect) as the most distressing factors for nurses in special care units (1). Beik morady et al (2011) concluded that working with different classes of incompetent nurses and doctors and providing nonstandard treatment and care (inappropriate assignment of responsibilities and qualifications) were the most common causes of moral distress (21). According to the findings of Pauly et al (2009), American nurses also feel moral distress when working with inefficient and incompetent coworkers whose work is unsafe for their patients; therefore, inappropriate assignment of responsibilities and qualifications is the most important factor of moral distress in this group of nurses (22). Having a high mean score in the errors aspect in this study can point out that the study population had a high occurrence of medical errors and unreported medical errors; in a way that worrying about professional errors, threatens the nurses in this study and that it is the most affecting factor in causing moral distress in them.

The result of this study showed that between Conscientiousness and moral distress in some aspects there is a meaningful and negative relation. There is a meaningful and negative relation Between the reliability aspect (for example I am a very competent and proficient person) with the inappropriate assignment of responsibilities and qualifications aspect (example: nurses’ and personnel’s lack of sufficient knowledge and skill) and Nonconformity to ethical principles aspect (example: not observing justice between personnel) and also between total moral distress with the reliability aspect of Conscientiousness in special care unit nurses. Since the reliability aspect refers to a person’s capability, it can be concluded that the more capable, disciplined and diligent the nurses are the better they do their professional responsibility which is providing high-quality care to patients and as a result have less moral distress. Shooride (2013) conducted a qualitative study examining the moral distress of nurses in special care units. Nurses believed that conscience is an important factor that motivates them in providing adequate care to patients (23). In a study by glasberg et al (2006) done with the aim of studying Conscientiousness in healthcare personnel in Sweden, it was concluded that providing low-quality care to patients causes conflict and guilt in healthcare personnel (24). In a study by hashemi et al (2010) about reports of nurses’ errors in Tehran and Shiraz, nurses considered conscience as an important factor in dealing with a patients’ pain management; which increases the quality of care in patients (25). jalaly et al (2010) studied the experiences nurses in Tehran had which conflicted with their conscience. Nurses expressed that their conscience guides them towards providing higher quality care (3). In a study by Gustafsson et al (2010) about Burnout and perceptions of conscience among health care personnel in Sweden, healthcare personnel expressed that their conscience helps them to provide ideal care (26) with is consistent with this study.

The results show that there is a meaningful relation between Conscientiousness and some demographic information such as age, education, field of study, work experience, unit, employment status, and marital status. There is a meaningful relation between Conscientiousness and age, with the highest mean of Conscientiousness being in the age range of 33-44 years. And it can be concluded that because this age range is the peak of performance and maturity, nurses also had the most Conscientiousness at this age. There was no meaningful relation between Conscientiousness and gender. But men's average Conscientiousness score is higher than that of women. ghorbanzade et al (2013) also reported men’s Conscientiousness as higher than that of women (18). But juthberg (2007) in their study about stress of conscience concluded that women had a higher Conscientiousness than men (27). Åhlin (2013) also showed in their study about the relationships between the stress of conscience and concepts of importance that women possessed higher Conscientiousness than men (28).

Attendant nurses having a higher mean Conscientiousness can mean that having more responsibility can increase Conscientiousness in nurses. There is a meaningful relationship between education and Conscientiousness in a way that those with a master’s degree had a higher score than those with a bachelor’s which can point out that having higher education increases success orientation and reliability in people. in other words, education can make a person put higher criteria of success for himself thus increasing his Conscientiousness.

There is a significant relationship between Conscientiousness and work experience and people with work experience of 11-20 years in special care units had the highest Conscientiousness score which shows that nurses have the most efficiency and Conscientiousness in this work experience range. There is a meaningful relationship between marital status and Conscientiousness; married personel had a higher mean Conscientiousness score than unmarried personnel. This can be due to the commitment that marriage creates in people.

According to the results of this study, there was a significant relationship between the type of unit the nurses were assigned to and the amount of moral distress among them; ICU nurses had the highest mean score of moral distress compared to CCU and dialysis units. According to the results of studies by Bekmoradi et al., As well as Sadeghi et al., Moral distress in the ICU unit is higher than in other units (21 and 29), which is consistent with the results of this study. It appears that various factors such as the type of patients and their acute care conditions, the overwhelming pressure and volume of work, the special conditions governing critical care units and the need for critical and widespread ethical decision-making in the care of critically ill patients and their treatment, which can present nurses with ethical challenges, cause more distress in the intensive care unit than in the other sections.

Conclusion

Results of the study showed that strengthening human values such as honesty, discipline, perseverance, diligence, capability and providing enough motivation for nurses to achieve success, inspires competence and increases efficiency in nurses resulting in a higher Conscientiousness and lowers moral distress in the nurse’s workplace. Also, the possibility of continuing education and observing organizational justice are important factors in reducing nurses’ moral distress. Considering that attendant nurses have lower moral distress than nurses, it can be understood that improving the decision-making ability of the nurses and giving them more responsibility can lower their moral distress. Additionally, with moral distress being higher in the ICU and lower in the dialysis unit, rotating forces between these units can lower moral distress in nurses.

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