

# The Relationship between Perception of Futile Care and Moral Distress of Nurses in Critical Care Units

Masoumeh Otaghi, Sedigheh Shirkhani\*, Arman Azadi, Ali Khorshidi, Seyed Rahmatollah Mousavimoghadam

Received: 18 November 2017 / Received in revised form: 30 April 2018, Accepted: 03 May 2018, Published online: 05 September 2018  
© Biochemical Technology Society 2014-2018  
© Sevas Educational Society 2008

## Abstract

**Background:** Futile care of patients with less than five percent chance of survival places nurses in moral distress conditions. The aim of this study was to determine the relationship between perception of futile care and moral distress in nurses in critical care units. **Methods:** This descriptive-analytic study was performed on 155 nurses in educational hospitals affiliated to Ilam University of Medical Sciences in 2018. Data gathering tools were moral distress (MDS-R) and perception of futile care questionnaires. Data were analyzed by linear regression, Pearson's correlation coefficient, one way ANOVA and independent t-test by SPSS23 software and  $p=0.05$ . **Results:** In majority of the nurses, the levels of Perception of futile care was high (77.8%) and moral distress was moderate (0.54%). Pearson's correlation coefficient showed a significant relationship between moral distress and perception of frequency of futile care ( $r =0.407$ ,  $p<0.01$ ) as well as perception of intensity of futile care ( $r =0.381$ ,  $p<0.01$ ). Increasing perception of futile care increased moral distress in the nurses ( $p< 0.05$ ). Linear regression indicated a significant relationship between moral distress and perception of frequency of futile care ( $\beta =0.263$ ,  $p=0.034$ ) as well as past clinical experience in critical care units ( $\beta =0.209$ ,  $p=0.023$ ). **Conclusion:** Levels of perception of futile care was high and moral distress was moderate in the nurses. There was direct and significant relationship between moral distress and perception of futile care. Educating professional ethics and taking palliative care can drive nursing from futile to effective care.

**Keywords:** Perception of Futile Care, Moral Distress, Nurse, Critical Care Units

## Introduction

Nursing care is a core component of the nursing and includes training, professional practices, processes, and decisions concepts that affect health (Yekefalah & Ashktorab, 2015). Nurses are the largest providers of care services and the main responsible for the quality of care legally and ethically. From the point of view of nursing experts, the final definition of the quality of care is "the provision of safe services in accordance with nursing standards to lead to patient satisfaction" (Dehghan-Nayeri, 2015). Improving patient rights is one of the priorities of health care providers and is an important indicator of the quality of care provided in the health care system (Aazami & Mozafari, 2015). Developing health services offers more opportunities for patients to survive. Meanwhile, the increase in the long life without the quality for patients in end stage has left nursing care providers with challenges in terms of salvaging or futile care (Bradley et al., 2010).

The term "futile care" was first defined in 1980 and has entered medical ethics since 1990 (Bramley & Matiti, 2014). Schneider et al. (1998) differentiated between the effects and benefits of curing. They believe that a cure that cannot produce such benefits as better prognosis, comfort, and wellbeing is ineffective, even if it has measurable effects (Rezaei Aderyani et al., 2017). The futile care depends on the culture, values and beliefs, medical progress and emotional conditions existing in the underlying country and can have nursing and medical aspects (Khalaf et al., 2014). In many cases, patients are kept on daily and monthly basis in critical care units without care that have an effect on life or quality of life (Gallagher & Krawczyk, 2013). Futile care increases costs without a reasonable hope for relative

---

**Masoumeh Otaghi, Arman Azadi**

Department of Nursing, Faculty of Nursing & Midwifery, Ilam University of Medical Sciences, Iran

**Sedigheh Shirkhani\***

MSc Student, Faculty of Nursing & Midwifery, Ilam University of Medical Sciences, Ilam, Iran

**Ali Khorshidi**

Department of Epidemiology, Faculty of Medicine, Ilam University of Medical Sciences, Iran

**Seyed Rahmatollah Mousavimoghadam**

Department of Philosophy, Faculty of Medicine, Ilam University of Medical Sciences, Iran

\*Email: sedighe.shirkhani@gmail.com

improvement in the independence, interactions, environment, and health status (Aghabarari & Dehghan Nayeri, 2015). Futile care can lead to painful complications such as bed sores, venous infections and ventilator-induced pneumonia (Yekefallah et al., 2017).

Some futile care challenges faced by the nurses are about cardiopulmonary resuscitation, poor management of DNR, and the withdrawal caring role of nurses (Yekefallah et al., 2017; Sibbald et al., 2007). Doctor Safar is the father of modern resuscitation science. In spite of putting relentless effort to cardiopulmonary resuscitation, he was always worried that this technique would be unusual in any kind of cardio-pulmonary arrest. He would remark: "resuscitation is administered to whom dying with healthy heart and brain" (Peimani et al., 2012). There are many tensions in the nursing profession that have adverse effects. One of these tensions is moral distress. Jameton first defined the concept in 1984. He believed that the conflict between the willingness of the nurse to do the right thing and the ethics on one hand, and the organization's laws about acceptable measures, on the other hand, is a source of moral tension for nurses in the health environments (Hasanlo et al., 2017). Wilkinson explains moral distress as a mental imbalance and a negative feeling, and it happens when a person is in a position unable to make a proper decision to solve the problem (Hasanlo et al., 2017; Wilkinson, 1987).

The five main issues of moral distress in the treatment staff are remarkable as follows: the dichotomy of treatment and care (in particular, the prioritization of work issues towards human dignity), unnecessary medical treatment and the constraint of nurses on coercion to use these measures, suffering and tension as a result of the lack of moral sensitivity, the problems caused by the limited autonomy of nurses in treatment, conflict with physicians and the involvement of nurses with organizational policies, which consequently increase dissatisfaction of patients (Choe et al., 2015). Moral burnout caused by futile care is very high. Hence, reducing futile care leads to reduced stress and increased job satisfaction among nurses. As the nurse's experience in futile care increases with increasing duration of working in critical care units, the diagnosis of futile situations by nurses will be increased. Of course, the lack of adaptive mechanisms against moral distress is seen by the nurses in critical care units (Pool et al., 2013)

In caring the patients in end stages, it should be given palliative care; since other kind of caring are not effective. This care begins since a life-threatening illness was been diagnosed, and also continues until the patient's recovery, or even death and mourning (Nunes et al., 2016). Futile care can create a moral tension in the nurses. The aim of this study was to determine the relationship between the perception of futile care and moral distress of nurses in critical care units in Ilam hospitals in 2018.

## Materials and Methods

An analytical cross-sectional study was conducted to determine the relationship between the perceived futile care and moral distress on 175 nurses working or having experience in critical care units in three educational hospitals (Shahid Mostafa, Imam Khomeini and Ayatollah Taleghani) in Ilam in 2018. The inclusion criteria included: bachelor's degree in nursing, at least six months of continuous work experience in critical care units, informed and written consent for participation in the study. Incomplete and incorrect registration of questionnaires, lack of willingness to continue cooperation in the study was considered as exclusion criteria. Data collection tools were demographic information form, the questionnaires of perceived futile care and moral distress questionnaire.

Futile Care questionnaire was made and validated by Mohammadi et al in 2012. Criterion validity method was used by measuring correlation with the localized tool ( $r = 0.4$ ). The reliability by internal correlation coefficient (Cronbach's alpha) in 30 nurses was 0.82. The questionnaire consisted of 17 questions. Using Likert's method from "never" to "always", the score is from 0 to 5. In total, the scoring range is between zero and 85. Scoring of intensity of futile care is as follows: 0 to 28 (low), 29 to 56 (moderate), and 57 to 85 (intense). The same is true for scoring of frequency of futile care (Mohammadi and Roshanzadeh, 2015).

Moral distress scale- revised (MDS-R, by Hamric, Borchers and Epstein, 2012) was translated and updated by Arab and Barzegari (2014). Face and content validity was confirmed by qualified professors. Reliability was 0.75 by Cronbach's alpha. The questionnaire contains 18 questions and its scoring is based on a 5-point Likert scale that measures two levels of distress and frequency from nothing to very large. Given that each score can range from 0 to 16 points, the whole score will range from 0 to 288. Obviously, the higher the score, the greater the degree of moral distress and vice versa will be. Scale levels include: low level: 0 to 96, average level: 97 to 192 and high level: 193 to 288 (Sirilla, 2014).

In order to collect data, the researcher referred to various clinical departments of the hospitals in different shifts. Having presented the research goals, she administered the questionnaires to qualified nurses who were willing to participate in the study. The questionnaires were completed by self-rating. The data collection lasted two months. The percentage of responses to the questionnaire was 89%. Finally, 155 questionnaires were completed and entered into the analysis phase. Data were analyzed using SPSS. Frequency, mean  $\pm$  standard deviation and correlation between variables were analyzed through linear regression model and Pearson correlation coefficient, one way ANOVA and independent t-test. The significance level for the tests was considered to be 0.05 ( $p < 0.05$ ).

## Findings

Highest frequency was from the age range of 30-40 years (51.6%) and the lowest frequency was related to the age range over 40 years (12.9%). The majority of the participants were married, female, with bachelor's degree (Table 1).

Most participants had a high perception of the severity and frequency of futile care. None of them would have a low perception of futile care. Most participants had a modest perception of moral distress (Table 2).

None of the participants' demographic information had any effect on the perception of futile care and moral distress. Increasing perception of the futile care, moral distress also increased ( $r=0.416$ ,  $p<0.01$ ). There was a significant relationship between the perception of frequency of futile care and moral distress ( $r=0.407$ ,  $p<0.01$ ). The relationship between severity of futile care and moral distress was significant statistically ( $r=0.381$ ,  $p<0.01$ ) (Table 3).

Linear regression showed that frequency of futile care ( $\beta=0.263$ ,  $p=0.034$ ) and experience working in critical care units ( $\beta=0.209$ ,  $p=0.023$ ) had a significant effect on the intensity of moral distress. However, age and sex variables had no significant effect on the dependent variable (Table 4).

**Table 1-** Demographic characteristics of the participants

| Variable                                  |                    | Frequency (%) |
|---|--------------------|---------------|
| Gender                                    | Male               | 39 (25.2)     |
|   | Female             | 116 (74.8)    |
| Age                                       | Less than 30 years | 55 (35.5)     |
|   | 30 to 40 years     | 80 (51.6)     |
|   | More than 40 years | 20 (12.9)     |
| Marital Status                            | Single             | 49 (31.6)     |
|   | Married            | 106 (68.4)    |
| Education                                 | BSc                | 136 (87.7)    |
|   | MSc                | 19 (12.3)     |
| Total working experience                  | Less than one year | 2 (1.3)       |
|   | 1-5 years          | 57 (36.8)     |
|   | 6-10 years         | 41 (26.5)     |
|   | More than 10 years | 55 (35.5)     |
| Working experience in critical care units | Less than one year | 22 (14.2)     |
|   | 1-5 years          | 84 (54.2)     |
|   | 6-10 years         | 35 (22.6)     |
|   | More than 10 years | 14 (9)        |

**Table 2-** Scores of perception of intensity and frequency of futile care and moral distress

| Level of Scoring<br>Variable           | Low           | Midium        | High          |
|--|---------------|---------------|---------------|
|  | Frequency (%) | Frequency (%) | Frequency (%) |
| Perception of intensity of futile care | 0 (0.00)      | 33 (21.3)     | 122 (78.7)    |
| Perception of frequency of futile care | 0 (0.00)      | 39 (25.2)     | 116 (74.8)    |
| Moral distress                         | 71 (45.8)     | 82 (52.9)     | 2 (1.3)       |

**Table 3-** Correlation coefficient between quantitative variables

| Variable       | Frequency of futile care | Intensity of futile care |
|----------------|--------------------------|--------------------------|
| Moral distress | $r=0.407$<br>$p<0.01$    | $r=0.381$<br>$p<0.01$    |

**Table 4-** Results of linear regression model for studied variables on moral distress

| Model                             | Beta (SE)      | Beta   | t      | p     |
|-----------------------------------|----------------|--------|--------|-------|
| Constant                          | -25.718(25.52) | -      | -1.008 | 0.315 |
| Intensity of futile care          | 0.673(0.543)   | 0.151  | 1.240  | 0.217 |
| Frequency of futile care          | 1.052(0.492)   | 0.263  | 2.137  | 0.034 |
| Age                               | -3.353(5.045)  | -0.061 | -0.664 | 0.507 |
| Sex                               | 5.167(6.285)   | 0.062  | 0.822  | 0.412 |
| Experience in critical care units | 9.301(4.052)   | 0.209  | 2.295  | 0.023 |

## Discussion

According to the findings of this study, most participants had high perception of futile care. In their study on 82 ICUs in northwestern Europe, Piers et al. (2011) concluded that most nurses had high perception of futile care. Dunwoody et al. (2010) reported high perception of futile care, and introduced conditions of nurses following futile care as a part of the moral distress.

In their study, Zagheri Tafreshi et al. (2012) assessed the perception of physicians and nurses regarding futile care and reported its high level in the participants. The study results of Rostami et al. (2017) showed that most nurses had a modest perception of the futile care. Mohammadi and Roshanzadeh, (2015) conducted a study in CCU, ICU, NICU, dialysis, and oncology wards in South Khorasan indicating that nurses' perception of the severity and frequency of the futile care was reported to be moderate. In most studies, nurses had a moderate and high level of futile care because they spend most of their time on implementing physician orders, and if they find these orders helpful to the patient, they consider care to be beneficial and if, despite the implementation of the orders, they see no recovery in the condition of the patient, they consider the care to be futile and useless.

The results of the recent study indicate that most nurses had a modest perception of moral distress. In the study of Tavakol et al. (2013), the moral distress in most nurses has been reported moderately. The results of Borhani et al. (2012) reported the intensity and frequency of moral distress in nurses at the moderate level. The results of Shafipour et al. (2015) reported a moderate moral distress among nurses. The results of Abbaszadeh et al. (2011) concerning moral distress among nurses indicated a high degree of moral distress in different clinical situations among nurses. Also, Janvier (2007) reported the moral distress levels of nurses in the neonatal department at a high level. The nurses' moral tensions are likely to be reduced in this study due to time and nurses' awareness of tension issues and the strategies to deal with them.

The results of the recent study indicated that increasing the level of perceived scores of futile care would increase the moral distress levels of nurses moderately. The study by YekeFallah et al. (2017) entitled ICU nurses' response to futile care revealed that decreasing futile care reduced the moral distress in nurses. The main task of the nurses is to mitigate the pain and suffering of the patient. While implementing some physician's orders, the nurses feel that their care is ineffective, or they inflict pain and suffering on the patient and the family upon sole executing the physician's orders, they will inevitably suffer from moral distress.

In a cross-sectional descriptive study conducted on nurses working in the CCU in the United States, Mobley et al (2007). Concluded that increasing the perception of futile care increases the moral distress in nurses. A qualitative study by Choe et al. (2015) showed that increasing the perception of unnecessary care and activities and reducing the autonomy of nurses in carrying out actions that do not benefit patients may result in their moral distress. In their study, Dunwoody et al. found that increasing the understanding of futile care raises moral distress in nurses. The results of study of Asayesh et al. (2009) also showed that increased awareness of futile care would intensify moral distress (Asayesh et al., 2018). The results of the recent study have reported the moral distress of nurses in futile caring. The differences that reported regarding the high level of moral distress of nurses can be due to the time elapsed between the training courses held for professional ethics and the study population of this study.

Age, gender and marital status had no effect on the two variables. The results of the recent study were in line with the study of Tavkel et al. (2013) entitled moral distress among nurses in intensive care units, in which there was no significant relationship between moral distress and age. Ebrahimi et al. (2013) carried out a study on 418 nurses in North West of Iran and showed there was no significant relationship between the mean of moral distress and age as well as gender of participants (Ebrahimi, et al., 2013). In this regard, Shoorida et al. (2015) reported no significant relationship between gender and moral distress (Shoorideh et al., 2015). Also, Abbaszadeh et al. (2012) found no significant relationship between gender and moral distress in the nurses (Abbaszadeh et al., 2012). The results of the recent study differed from Ashktorab et al. (2011), in which the moral distress of older nurses was more severe. Also, Joolae et al. (2009) reported that there was an inverse relationship between age and moral distress, and with age, the moral distress in nurses was reduced. The results of the recent study indicate that with increasing perception of futile care, there is a significant difference concerning moral distress in the emergency ward and the ICU. The results of the recent study were in line with the study of Joolae et al (2012).

The results of the recent study showed that those who have higher education are more likely to suffer from moral distress than those who are less trained in dealing with stressors, but education did not have much to do with the level of perceived care. The study by Shoorideh et al. (2015) showed that there is no significant relationship between moral distress and education. But the results of Sirilla and colleagues (2014) indicated that there was a significant negative correlation between the level of education and moral distress in nurses. BeikMoradi et al. (2011) revealed in their study that there was no relationship between moral distress and education that was contrary to the present study findings.

Among all the studied variables, only was the mean score of intensity of perception of futile care the same among individuals with different general records and did not have a significant difference. As far as other variables are concerned, since their significance level is less than 0.05, it is concluded that the mean scores of these variables are not the same among people with different work histories. Those with less work experience showed increasing intensity and frequency of moral distress as well as the perception of frequency of futile care. In this regard, Sadeghi et al. (2014) reported a negative and significant correlation between the work experience and the frequency of moral distress, and nurses reported a lower stress level with increasing work experience. In the study of Beik Moradi (2011), there was no significant relationship between moral distress and clinical experience, which can be due to the effect of experience and nurses' knowledge and professional skill in reducing their moral distress. Of course, this requires more research in this regard. It is also necessary to conduct professional ethics classes for individuals with less experience in order to reduce the intensity of moral distress and frequency of futile care.

The recent study shows that with increasing work experience in critical care units, the overall perception of futile care and moral distress increases in nurses. The results of study of Asayesh et al. (2009) indicated also an increased work experience in ICU resulted in much more nurses' perception of futile care and moral distress. In the study of Borhani et al. (2014) there is a significant positive correlation between work experience in the ICU department and moral distress, and with increased work experience, moral distress has also increased. It seems that because of constant exposure to situations with inappropriate care and the creation of stressful conditions due to futile care in critical care units, moral stress also increases. Hence, some strategies such as rotation of nurses can reduce persistent exposure to situations with futile care and cause moral stress and burnout in nursing staff to diminish.

Limitations of the present study refer to completing self-reporting questionnaires. Individual characteristics such as psychological status and job conditions can affect the answers to questions. For which a timely opportunity was devoted to minimize the potential biases. Qualitative studies in this area as well as studies with more sample size can further examine the effects of this issue on nurses.

## Conclusion

The results of this study showed nurses' perceptions of futile care and moral distress was at the moderate level. Additionally, a high perception of futile care has increased the moral distress in nurses. Consequently, planning for professional ethics training courses can lead the futile caring to beneficial and relieving care in the patients.

## Acknowledgments

This article is adapted from the thesis of the Master's Degree in Nursing, which was approved by the ethics committee of Ilam University of Medical Sciences with ethics code "ir.medilam.rec.1397.68". We would like to appreciate all the officials and staff of Imam Khomeini, Shahid Mostafa and Ayatollah Taleghani hospitals, Nursing and Midwifery Faculty, and Ilam University of Medical Sciences, and all nurses collaborating in this study.

## Conflict of interest statement

None declared

## References

- Aazami, S., & Mozafari, M. (2015). Development of a scale for the evaluation of patients' rights prerequisites at educational hospitals in Iran: a study using the Delphi technique. *Journal of medical ethics and history of medicine*, 8.
- Abbaszadeh, A., Borhani, F., & Kalantary, S. (2011). The moral distress of nurses in health centers in the city of Bam in 1390. *Medical Ethics Journal*, 5(17), 119-140.
- Abbaszadeh, A., Nakhaee, N., Borhani, F., & Roshanzadeh, M. (2012). Moral distress in the nurse's practical action: A descriptive-cross sectional study. *Medical Ethics Journal*, 6(21), 113-130.

- Aghabarari, M., & Dehghan Nayeri, N. (2015). Futile Care: challenges of applying futility concept in caring domain. *Journal of hayat*, 21(1), 1-5.
- Asayesh, H., Mosavi, M., Abdi, M., Masoud, M. P., & Jodaki, K. (2018). The relationship between futile care perception and moral distress among intensive care unit nurses. *Journal of Medical Ethics and History of Medicine*, 11.
- Ashktorab, T., & Vaezi, A. (2013). Moral distress: evaluating nurses' experiences. *Iranian Journal of Medical Ethics and History of Medicine*, 6(1), 64-73.
- Beikmoradi, A., Rabiee, S., Khatiban, M., & Cheraghi, M. A. (2012). Nurses' distress in intensive care unit: a survey in teaching hospitals.
- Borhani, F., Abbaszadeh, A., Nakhaee, N., & Roshanzadeh, M. (2014). The relationship between moral distress, professional stress, and intent to stay in the nursing profession. *Journal of medical ethics and history of medicine*, 7.
- Bradley, C., Weaver, J., & Brasel, K. (2010). Addressing access to palliative care services in the surgical intensive care unit. *Surgery*, 147(6), 871-877.
- Bramley, L., & Matiti, M. (2014). How does it really feel to be in my shoes? Patients' experiences of compassion within nursing care and their perceptions of developing compassionate nurses. *Journal of clinical nursing*, 23(19-20), 2790-2799.
- Bruce, C. R., Miller, S. M., & Zimmerman, J. L. (2015). A qualitative study exploring moral distress in the ICU team: the importance of unit functionality and intrateam dynamics. *Critical care medicine*, 43(4), 823-831.
- Choe, K., Kang, Y., & Park, Y. (2015). Moral distress in critical care nurses: a phenomenological study. *Journal of Advanced Nursing*, 71(7), 1684-1693.
- Dehghan-Nayeri, N., Ghaffari, F., & Shali, M. (2015). Exploring Iranian nurses' experiences of missed nursing care: a qualitative study: a threat to patient and nurses' health. *Medical journal of the Islamic Republic of Iran*, 29, 276.
- Dunwoody, D. R. (2010). *Nurses' level of moral distress and perception of futile care in the critical care environment*. D'Youville College.
- Ebrahimi, H., Kazemi, A., Asghari Jafarabadi, M., & Azarm, A. (2013). Moral distress in nurses working in educational hospitals of Northwest Medical Universities of Iran. *Iranian Journal of Medical Ethics and History of Medicine*, 6(4), 80-88.
- Gallagher, R., & Krawczyk, M. (2013). Family members' perceptions of end-of-life care across diverse locations of care. *BMC palliative care*, 12(1), 25.
- Hasanlo, M., Azarm, A., Asadi, P., Avazeh, A., Hojt Ansari, M., Ebrahimi, H., & Asghari Jafarabadi, M. (2017). Illustration and analysis of information on moral distress and its dimensions among nurses in educational-therapeutic health centers. *Iranian Journal of Medical Ethics and History of Medicine*, 10(1), 119-130.
- Janvier, A., Nadeau, S., Deschenes, M., Couture, E., & Barrington, K. J. (2007). Moral distress in the neonatal intensive care unit: caregiver's experience. *Journal of perinatology*, 27(4), 203.
- Joolae, S., Jalili, H. R., Rafii, F., Hajibabae, F., & Haghani, H. (2012). Relationship between moral distress and job satisfaction among nurses of Tehran University of Medical Sciences Hospitals. *Journal of hayat*, 18(1), 42-51.
- Khalaf, A., Westergren, A., Ekblom, Ö. Al-Hazzaa, H. M., & Berggren, V. (2014). Nurses' views and experiences of caring for malnourished patients in surgical settings in Saudi Arabia—a qualitative study. *BMC nursing*, 13(1), 29.
- Mobley, M. J., Rady, M. Y., Verheijde, J. L., Patel, B., & Larson, J. S. (2007). The relationship between moral distress and perception of futile care in the critical care unit. *Intensive and Critical care nursing*, 23(5), 256-263.
- Mohammadi, S. and M. Roshanzadeh, (2015). Exploring the Perception of intensive care unit nurses of futile care. *Education & Ethic in Nursing*, 2015. 3(2): p. 65-72. DOI: 10.5455/msm.2016.28.151-155
- Nunes, S., Rego, G., & Nunes, R. (2016). Difficulties of Portuguese patients following acute myocardial infarction: predictors of readmissions and unchanged lifestyles. *Asian nursing research*, 10(2), 150-157.
- Peimani, M., Zahedi, F., & Larijani, B. (2012). Do-not-resuscitate order across societies and the necessity of a national ethical guideline. *Iranian Journal of Medical Ethics and History of Medicine*, 5(5), 19-35.
- Piers, R. D., Azoulay, E., Ricou, B., Ganz, F. D., Decruyenaere, J., Max, A. ... & Depuydt, P. (2011). Perceptions of appropriateness of care among European and Israeli intensive care unit nurses and physicians. *Jama*, 306(24), 2694-2703.
- Pool, I., Poell, R., & ten Cate, O. (2013). Nurses' and managers' perceptions of continuing professional development for older and younger nurses: A focus group study. *International journal of nursing studies*, 50(1), 34-43.
- Rezaei Aderyani, M., Nazari Tavakkoli, S., Kiani, M., Abbasi, M., & Javadi, M. (2017). Medical futility, useless or frivolity? *Iranian Journal of Medical Ethics and History of Medicine*, 10(1), 282-290.
- Rostami, S., Esmaeali, R., Jafari, H., & Shorofi, S. A. (2017). Perception of futile care of nurses in intensive care units. *Iranian Journal of Medical Ethics and History of Medicine*, 10(1), 155-164.
- Sadeghi, M., H. Ebrahimi, and S. Aghayan, (2015). Evaluation of the Moral Distress and Related Factors in Clinical Nurses of Shahroud City. *Journal of Nursing Education*. 3(3): p. 20-28
- Shafipour, V., Esmaeili, R., Heidari, M. R., Aghaei, N., Saadatmehr, S. R., & Sanagoo, A. (2015). Investigating the level of moral distress and its related factors among nurses in mazandaran burn center. *Journal of Mazandaran University of Medical Sciences*, 25(126), 58-67.

- 
- Shoorideh, F. A., Ashktorab, T., Yaghmaei, F., & Alavi Majd, H. (2015). Relationship between ICU nurses' moral distress with burnout and anticipated turnover. *Nursing ethics*, 22(1), 64-76.
- Sibbald, R., Downar, J., & Hawryluck, L. (2007). Perceptions of "futile care" among caregivers in intensive care units. *Cmaj*, 177(10), 1201-1208.
- Sirilla, J. (2014). Moral distress in nurses providing direct care on inpatient oncology units. *Clinical journal of oncology nursing*, 18(5).
- Wilkinson, J. M. (1987, April). Moral distress in nursing practice: experience and effect. In *nursing forum* (Vol. 23, No. 1, pp. 16-29). Oxford, UK: Blackwell Publishing Ltd.
- Yekefallah, L., & Ashktorab, T. (2015). Experiences of Critical Care Units Nurses about Futile Care a Qualitative Study. *Preventive Care in Nursing & Midwifery Journal*, 4(2), 23-34.
- Yekefallah, L., Ashktorab, T., Manoochehri, H., & Alavi Majd, H. (2016). Intensive Care Nurses' Reaction to Futile Cares: A Phenomenological Study. *Journal of Holistic Nursing and Midwifery*, 26(2), 107-117.
- Yekefallah, L., Ashktorab, T., Manoochehri, H., & Majd, H. A. (2017). Frequency of futile care in viewpoint of ICU nurses in province of Qazvin (2014). *The Journal of Qazvin University of Medical Sciences*, 21(5), 47-54.
- Zagheri Tafreshi, M., Pazargadi, M., Barbaz, A. H., & Atashzadeh Shorideh, F. (2012). Quality of Nursing Care: Nurses', Physicians', Patients' and Patients Family's Perspectives: A Qualitative Study. *The Journal of Urmia Nursing and Midwifery Faculty*, 10(4), 648-665.