Research Paper

Moral Distress in Pre-hospital Emergency Technicians: A Cross-sectional Study in Iran

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ABSTRACT

Background: Emergency medical services (EMS) personnel are subject to moral hazards during work, leading them to find moral distress (MD). Our literature review showed a gap in knowledge related to MD in EMS personnel. Therefore, this study investigated MD and its influential factors in pre-hospital emergency technicians.

Materials and Methods: This descriptive-analytic study was conducted in Iran in 2017. A convenience sampling method was used to select 265 technicians working in EMS from several cities in Iran. The MD thermometer was used to measure the MD in the technicians. The collected data were analyzed using SPSS software, version 20.

Results: All the participants were male with mean age and work experience of 31.64±6.5 and 7.76±5.1 years, respectively. The mean score of MD was 4.6±1.8 (out of 10). Nearly 76% of the participants were with moderate levels of MD. A significant relationship was observed between the willingness of technicians to change or leave their job and the mean scores of MD in the participants.

Conclusion: EMS technicians experienced moderate levels of MD. Therefore, healthcare planners and policymakers need to pay more attention to this issue due to the complications of MD in healthcare personnel.

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1. Introduction

Given the physical, mental, spiritual, and psychological dimensions of patients' life, taking care of them can always be associated with ethical challenges and distresses in caregivers [1]. Emergency medical services (EMS) technicians are not exceptional in this matter [2]. The ethical aspects of work in EMS can be divided into four dimensions. The first dimension is before medical interventions, which include an initial judgment of the event, stigmatization, hazardous environment, and proper driving [2, 3]. Judgment is the first ethical challenge that an emergency technician encounters. This challenge occurs when a technician is faced with several emergencies at the same time and, due to a lack of resources, he has to select the situation that has priority [4, 5]. Although it seems that the difficulty in finding the address of an emergency service is more likely to be a structural challenge in a prehospital emergency, it can become a potential ethical challenge for the emergency technician. Despite being able to provide services for a person that requests help, delays in reaching the bedside can severely affect the quality of service in prehospital care and it could lead to ethical distress for the technician [3, 6]. Stigmatization sometimes appears in the technician's mind before the service that is provided by him. It depends on cultural and social issues; for example, providing emergency services to injecting drug users or alcoholics, or sex workers. Stigmatization can affect the provision of services by the emergency technician and it leads to appear moral distress in him [3, 7]. Providing services in difficult situations can also be a source of moral distress for the emergency technician. Some emergencies reported to emergency technicians may be life-threatening due to difficult circumstances, such as providing fire services. These situations cause doubt about services that are provided by an emergency technician and can lead to moral distress [4, 8]. Driving according to traffic laws can sometimes cause a delay in the services provided by emergency technicians to clients, while in emergencies, the technician is forced to drive at high speeds to save the patient's life, and at this time, endanger the safety of himself and the patient. This may sometimes lead to moral distress [3, 6, 9].

The second dimension is during the treatment, which includes true triage, denial of treatment or transferring the patient to the treatment center, obtaining informed consent, and maintaining the privacy of the patient. Patients' decisions of families about their treatment may also lead to moral distress for emergency technicians. For example, providing services to a child whose family does not allow him or her to be transferred to a hospital for specialized services puts the technician in a position of ethical decision-making that can result in moral distress [3, 10, 11]. How to communicate with other members of the treatment team and disagreeing with them can sometimes lead to moral distress in the emergency technician. Sometimes the technician may determine that the patient needs to be taken to a medical center, but other colleagues in the medical team disagree [6]. Informed consent and the patient's decision-making ability can sometimes face technicians with challenges. However, it is not always possible to obtain the patient's consent in a pre-hospital emergency, and the emergency technician sometimes may have moral doubts about what to do in that situation [4, 12]. Maintaining the patient's privacy and telling the truth about their disease in a pre-hospital emergency can also lead to moral distress. In many emergency missions, it is not possible to keep the patient's privacy. For example, removing the patient's clothes due to chest examinations in a patient with trauma and burns. There are also circumstances in the emergency that are challenging for the emergency technician to either tell or not to tell the truth. For instance, telling parents about the death of their child in an ambulance [2, 6, 10].

The third element is end-of-life care, such as cardiopulmonary resuscitation outside the hospital environment, the presence of family members at the time of resuscitation, the cessation of cardiopulmonary resuscitation, and futile care. For whom cardiopulmonary resuscitation (CPR) should not be started? How long should cardiopulmonary resuscitation continue? Are family members allowed to attend cardiopulmonary resuscitation in all circumstances? Answering these questions for emergency technicians is always a source of ethical reach. There is usually no clear explanation for these questions in scientific resources and caregivers and the emergency technician have to decide how to act in these situations. This can result in moral distress. For example, in an end-stage patient, the emergency technician may challenge whether or not to begin resuscitation and how long to continue [4, 13]. The fourth ethical aspect of work in EMS is related to ambulance perception issues, which include the announcement of bad news and taking care of minors [3]. Prehospital care providers experience a great deal of stress due to the care of traumatized children because they have received minimal training in child medical care, which can cause inefficient care as an important challenge [14].

The term moral distress (MD) is used to describe the psychological, emotional, and physiological distress experienced by medical personnel when they face an action taken contrary to their ethics, principles, and beliefs [15]. This term was first described by Andrew Jameton in 1984 [16]. Different categories of MD have been presented so far. In one category, it is divided into two types of initial and reactive. In this category, the initial MD is defined as the value of a person's first contact with distressing conditions, and the purpose of the MD is the one, in which individuals cannot perform properly due to the initial MD [17]. Experiencing MD can be associated with many complications for healthcare providers. Such complications are fatigue, anxiety and sleep disturbance, social dysfunction, depression, self-efficacy reduction, leaving the job, and burnout [18-21]. High levels of MD in healthcare personnel can also reduce the quality of care and services provided to patients [21].

Although healthcare personnel may experience MD at any level, previous studies have mostly focused MD on hospital personnel, especially nurses [22] and it is not considered among EMS personnel. However, there are many challenges in the daily routine care of EMS technicians which can lead them to face ethical challenges and consequently MD. Therefore, the present study was conducted to respond to the question regarding the level of MD experienced by EMS technicians and its predictors.

2. Materials and Methods

The present descriptive-analytic cross-sectional study was conducted in Iran in 2017. The sample of this study was comprised of all technicians working in EMS such as nurses, medical emergency technicians, anesthetic technicians, and surgical technicians.

A convenience sampling method was used to select the participants. Participants met the inclusion criteria if they had at least a degree in one of the medical sciences fields (nursing, anesthesia, surgical technician, and medical emergency), with one year of work experience in EMS. Participants who were not willing to contribute to the study or fill out the questionnaires incompletely were excluded.

The data collection period took almost 4 months. To collect information and carry out the initial cooperation, one of the researchers went to the study settings and informed the head of the section. Then, the aims and the methods of the study were explained to the technicians before participating in the study. Following the necessary coordination, the researcher referred to the EMS centers during the morning shift and distributed the questionnaires among participants. During this time, the researchers were available to answer any possible questions that the technicians may have relating to the items of the questionnaire. Informed consent was obtained before participating in the study. Also, they were assured that the findings of the study will be only used for the intended purposes.

Data collection was done using two instruments; the demographic checklist and the 'MD thermometer". The MD thermometer questionnaire was designed by Wocial and Weaver to investigate MD in clinical settings. The MD thermometer questionnaire is a single-expression tool with a scale of 11 scores between 0 and 10, which first defines MD, and describes how much MD has been experienced by clinicians over the past two weeks [23]. The score obtained from this tool categorized as mild distress (1-2 score), an uncomfortable state (3-4 score), a distressing situation (score 5-6), an intense mood (score 7-8), and the worst condition (9-10). In Wocial's study, this tool had good validity. At the end of the questionnaire, one question asks if you have ever been under the pressure of an MD and, as a result, think about changing or leaving your job. In the present study, after granting permission from the designer, the questionnaire was translated into Persian and provided to two specialist professors in the field of ethics to confirm its validity and reliability.

The collected data were analyzed using SPSS software, version 20. Descriptive statistics (Mean±SD and frequency) and inferential statistics (independent t-test, Pearson correlation coefficient) were used for analyzing the data. $P<0.05$ were considered significant in all tests.

3. Results

All 265 participants in the study were male. Most of the participants were married (187 people). The mean age and work experience of participants were 31.64±6.5 and 7.76±5.1 years, respectively. Of all the 265 participants, 225 reported that they have participated in workshops on medical ethics.

The mean score of MD in participants in the present study was 4.6±1.8. In terms of frequency, 9.1, 43.8, 32.5, 11.3, and 3.4% of participants reported mild, uncomfortable, distressing, intense, and the worst possible levels, respectively. The mean score for single and married participants were 4.51 and 4.64, respectively, indicating no significant difference between the two groups (P=0.415). The mean score of MD in participants who had previ-

ously participated in medical ethics workshops was 4.5, and in those who had not participated in workshops was 4.8. Although the mean score of MD in the group with an experience of participation in the medical ethics workshops was lower than the other group, this difference was not statistically significant (P=0.608). The results of the Pearson correlation coefficient test showed no significant relationship between the age of participants and the mean score of MD (P=0.208), as well as, the work experience and the mean score of MD (P=0.15).

The results showed a significant correlation (inverse) (P=0.009, r=-0.15) between the score of MD and the willingness of technicians to change or to leave their job due to pressure caused by MD.

4. Discussion

Working in pre-hospital settings faces emergency technicians with many challenging factors [3, 24], which in many cases can result in facing ethical challenges [3]. This study aimed to investigate the MD and its effective factors in pre-hospital emergency technicians. The results of this study indicated that the participants experience moderate levels of MD. Nearly 76% of the participants reported uncomfortable and distressing levels of MD. No significant relationship was observed between demographic variables and the mean scores of MD in the participants.

Previous studies conducted about MD have mostly focused on hospital personnel, and our searches did not show a study in this regard on pre-hospital emergency technicians. In a study in Iran, in 2016, Mahdavi Fashtami et al. examined the MD among 125 nurses working in the emergency section of the hospital. They used the Hammer-Morris code of ethics questionnaire for this purpose. Similar to the results of the present study, the results of Mahdavi Fashtami et al. showed that nurses working in the emergency section experienced a moderate level of MD [25]. In another study, in 2015, Naboureh et al. examined the MD levels in 185 nurses working in the emergency section and intensive care units. They used Corley's MD questionnaire. Similarly, the results of this study showed that nurses working in the emergency section and intensive care units experience moderate levels of MD [19]. In another study on Iranian physicians, Abbasi et al. studied 399 Iranian doctors. The results of their study showed that a significant percentage of doctors experienced relatively high degrees of MD. The results of this study also showed that doctors who had participated in medical ethics workshops had a lower level of distress [26].

The results showed that there is a relationship between the level of MD and the willingness to leave the career, which is consistent with the results of Sadeghi et al. (2017) and Cummings (2012) regarding the relationship between MD and the willingness to leave the career among nurses [27, 28]. In the present study, although the participants were thinking of changing or leaving their careers, they did not do this, which could be because they person has financial problems, as well as the conditions for finding another career in Iran with certain administrative processes.

Although MD can be associated with serious complications among healthcare providers, systems, and patients, there are limited studies that examine preventive and reducing strategies. In a study conducted by Mohammadi et al. it was shown that participating in ethical workshops can reduce MD levels among participants. In this study, the intervention group received four-session ethical workshops and the control group did not. The MD of participants in this study was evaluated before and after the intervention. The results of Mohammadi et al's study showed that the scores of MD of participants who participated in ethical workshops significantly reduced after education [29]. Another strategy that can be used to reduce and manage the MD of pre-hospital emergency technicians is the strategy of the American Association of Critical Care Nurses [30]. The American Association of Critical Care Nurses recommended a 4-A strategy to reduce the MD of nurses. Although the 4-A strategy was first developed for nurses in intensive care units, there were, then, several reports of usability in other environments [22]. The 4-A strategy provided by the American Nursing Association includes ASK, AFFIRM, ASSESS, and ACT. According to this guide, in the asking stage, a person tries to discover moral distress and its source. The physical, psychological, behavioral, and spiritual symptoms that a person experiences because of moral distress can be helpful at this stage. In the AFFIRM stage, a person is trying to confirm the moral distress experienced and commit to overcoming it due to long-term distress that can cause serious harm [30]. Talking to other coworkers, managers, and family members helps acknowledge moral distress at this stage. One of the other strategies to reduce and manage MD in pre-hospital emergency personnel is to set up different workgroups related to ethics. Workgroups that have a routine schedule to identify the ethical stressors were developed to identify people who are at risk of MD. A remarkable point in the findings of the present study was that a large percentage of participants in the study participated in ethical workshops; however, no significant differences were observed between those who participated

in these workshops and those who did not. It seems that the content of ethical workshops must also be modified in a precise manner to increase its effectiveness.

Limitations

Since almost all pre-hospital emergency personnel in Iran are men, the sample of this study was all male. Thus, this issue can affect the generalizability of the results to female pre-hospital emergency technicians.

5. Conclusion

Ethical distress can be associated with significant problems for medical personnel at any level. The results of the present study showed that pre-hospital emergency technicians experienced moderate levels of MD. Therefore, healthcare planners and policymakers need to pay more attention to this issue to consider preventive and reducing strategies. Given the lack of similar studies in this regard, it is strongly recommended that similar studies be carried out. It is also recommended that in future studies, the relationship between the MD of pre-hospital emergency technicians and burnout and leaving the job be considered. Also, qualitative studies in this regard can be useful.

Ethical Considerations

Compliance with ethical guidelines

This study was approved by the Ethics Committee of the University of Social Welfare and Rehabilitation Sciences, Tehran, Iran. Written informed consent was obtained from the participants.

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Authors' contributions

All authors equally contributed to preparing this article.

Conflict of interest

The authors declared no conflict of interest.

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