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SCIENTIFC CONTRIBUTION

Personal factors affecting ethical performance in healthcare workers during disasters and mass casualty incidents in Iran: a qualitative study

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Abstract In emergencies and disasters, ethics are affected by both personal and organizational factors. Given the lack of organizational ethical guidelines in the disaster management system in Iran, the present study was conducted to explain the personal factors affecting ethics and ethical behaviors among disaster healthcare workers. The present qualitative inquiry was conducted using conventional content analysis to analyze the data collected from 21 in-depth unstructured interviews with healthcare workers with an experience of attending one or more fields of disaster. According to the data collected, personal factors can be classified into five major categories, including personal characteristics such as age and gender, personal values, threshold of tolerance, personal knowledge and reflective thinking. Without ethical guidelines, healthcare workers are intensely affected by the emotional climate of the event and guided by their beliefs. A combination of personal characteristics, competences and expertise thus form the basis of ethical conduct in disaster healthcare workers.

Keywords Disasters · Mass casualty incidents · Ethical performance · Healthcare workers

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Introduction

Disasters and mass casualty incidents affect both public health and socioeconomic development (Donner and Rodríguez 2011). About three quarters of the world's population live in areas where at least one of the four main natural disasters leading to death, including earthquake, flood, hurricane and drought, have occurred in the past few decades (Hosseini 2008). Of the total of 41 types of natural disasters existing in the world, 31 have been reported in Iran. As a matter of fact, Iran ranks fourth among disaster-prone countries of the region and sixth across the world (Khankeh et al. 2007). Wars, terrorism, airplane crashes and nuclear power plant accidents are also considered a disaster or mass casualty incident, albeit man-made.

In disasters and mass casualty incidents, the priority is always to provide healthcare services to all those affected. Apart from the wasting of resources and the destruction of infrastructures, these incidents may lead to decisions that are not based on conventional health principles and healthcare services framework (Rios et al. 2015).

The majority of disaster-prone countries are faced with several ethical challenges in their provision of healthcare services, such as respect for the victims' autonomy, the importance of performing only useful medical procedures, respect for the dignity of those affected by the crisis (including locals, rescue-workers, etc.), preventing further harm to the affected, ensuring the equitable and fair distribution of the available resources, triage of the wounded and victims and making announcements and notifications. According to Rios, processes contributing to equality, such as transparency, stability, proportionality and accountability, are also considered challenging.

Many of the medical guidelines used for providing healthcare services in normal circumstances are not fit for

use in times of crisis for a number of reasons, including the greater urgency of making quick decisions and taking immediate action during these times, the emotions governing the field of action during disasters and the scarcity of both general and specialized equipment and tools.

In such circumstances, healthcare workers continue to face ethical challenges in their provision of healthcare services. The existing health guidelines are not clear on the ethical responsibilities and functions of healthcare worker in times of disaster (Grimaldi 2007). Disaster healthcare workers tend to encounter three fundamental challenges during disasters, namely their accountability, the limitations imposed and the difficulty of allocating the scarce resources available (Wynia 2006).

The researchers visited the Iranian National Committee for Natural Disaster Reduction (NCNDR) or the Comprehensive Crisis Management Plan for Tehran and were unable to find any ethical guidelines that applied to healthcare workers in disasters.

Studies have shown that healthcare workers have a poor understanding of the concept of personal readiness for participation in fields of disaster. It is therefore necessary to identify the factors that promote healthcare workers' understanding of this concept and empower them for presence in disaster operations (Wynia 2006). Large-scale nationwide guidelines should be developed for medical teams in accordance with virtue ethics and the practical principles of ethical performance in healthcare service provision in disasters and mass casualty incidents (Holt 2008).

As a large country that is prone to a variety of natural and man-made disasters, Iran lacks ethical guidelines for professional medical ethics in disasters. Developing a guideline for ethical performance in disaster healthcare workers requires first to identify the contributing factors and to then explain the processes of ethical performance and thus necessitates the examination of the phenomena affecting human behaviors under conditions of crisis—behaviors that are themselves affected by individual mentalities and interpretations. The examination of this phenomena should seek to focus on understanding lived human experiences. The present article is the result of a research project aiming to determine the personal factors affecting ethical performance in healthcare workers in disasters and mass casualty incidents in Iran. The researchers hope that the results of their study can prove beneficial to both healthcare professionals and future researchers.

Materials and methods

The present qualitative study focuses on understanding lived human experiences and extracts the general and personal aspects of these experiences from within their context (Polit and Beck 2005) and identifies the factors affecting ethical performance in disaster healthcare workers.

The participants were selected through purposive sampling from among different groups of disaster healthcare workers and with a first-hand experience of at least one of the crises and phenomena under examination and who were eloquent enough to express their views on the subject. The participants met two main criteria: (1) They had theoretical knowledge about disasters and mass casualty incidents, and (2) They had the experience of working in disaster and mass casualty incident operations. The researcher has sought throughout the study to examine the phenomena under study and their causes within a realistic context.

A total of 21 interviews were held with the participants. Prior to the interviews, the participants were briefed on the study objectives and were asked to submit their informed consent forms and to agree on a time and place for their interviews. The interviews were thus held in their preferred locations and lasted between 30 min and 1 hour, depending on the participant. The interviews began with the general open-ended question of "In your experience, what are the personal factors that affect ethical performance in healthcare providers during disasters and mass casualty incidents?" and were then guided toward more provoking questions to cover the study objectives. The interviews were recorded with participants' permission and were transcribed verbatim and simultaneously analyzed.

Data were collected using unstructured interviews to increase the depth of the study and improve the flexibility of the subject, and also through in-depth individual interviews (Strauss and Corbin 2011). The entire content of the interviews formed the unit of analysis. The full text of each interview was reviewed several times and meaning units were extracted from them. Participants' statements in the interviews were then reviewed once again to extract the themes and form the categories and subcategories. The categories were extracted directly from the reviewed and adjusted data (Graneheim and Lundman 2004) and were constantly matched with previous categories in an interactive process until data saturation occurred and sampling stopped. Field notes and reminders were also used in the collection and analysis of the data. The analysis of the data obtained from human experiences was performed using constant comparative and conventional content analysis.

The following methods were used to increase the validity and reliability of the data: (a) Ongoing prolonged engagement and the concurrent collection and analysis of the data, which allowed the researcher to receive immediate feedback on the data and to allocate enough time to hearing each participant during the actual interviews. (b) Time-triangulation, which meant collecting the data on multiple occasions in order to enable the proper use of the feedback and help ensure the validity of the findings. (c) Peer

check, which involved the review of the transcribed interviews and the collected data by some of the participants, along with peer debriefing and an external check, which involved getting the views of two or more non-participating experts about the data. To increase the transferability of the data and contribute to future studies, the researchers fully explained the methods of their study. Maximum variation sampling was used in the selection of participants. (d) The selection of the participants from skilled and willing individuals who were eloquent enough to express their experiences and impart their knowledge (Hatamipour and Rassouli 2015).

Ethical considerations

All the participants submitted their informed consent to take part in the study and were ensured of their right to withdraw from the study at any stage or to have the recording of their interviews stopped at their own discretion and also about the confidentiality of their data and their anonymity throughout the study. The researchers respected intellectual property rights, protected the data and adhered to their organization's privacy policy in the publication of the results. There were no conflicts of interest to declare. The literature and articles reviewed are fully cited in the references section.

Results

A total of 21 participants were selected from the healthcare workers who had attended several fields of disaster or mass casualty incidents and had taken different roles and responsibilities in these operations; for instance, relief-workers, medics, accident field managers and transfer and evacuation of wounded personnel.

The personal factors extracted from the interviews included personal characteristics (age and gender), personal values (beliefs, convictions, commitments, benevolence and accountability), the threshold of tolerance, personal knowledge (being trained, having experience and self-efficacy) and reflective thinking.

Personal characteristics: age

The majority of the participants believed that age was one of the factors that affected ethical performance. One participant stated, "Perhaps I wasn't subtle enough to actually grasp the issue and understand if it was ethical or not, or even to understand the many problems we were faced with. I was young, only 17 or 18, and it was my first ever experience of a disaster". Another participant argued, "I believe it's possible to provide good services in spite of being young and having so little knowledge".

Personal characteristics: gender

As for the effect of gender on the ethical performance of healthcare workers in disasters, the majority of the participants believed that men provided better services under these circumstances. One of the participants said, "Men did their job more professionally than women". Another participant noted, "A large part of the personnel at Zob Ahan Hospital were women and they were all frightened and would yell and scream at the atrocious sights. A few of the men also didn't get close to the scene".

Personal values were another finding of the study in the category of personal factors, which consist of beliefs, convictions, commitment, benevolence and accountability. The majority of the participants believed that personal values contribute significantly to ethical performance in addition to motivating attendance in fields of disaster for service provision.

Personal values: beliefs and convictions

The participants considered beliefs and convictions as influential factors, "When we have the choice to perform a task or to not do it, there are certain factors that affect our decision, like our training, convictions and beliefs". Some of the participants considered convictions an informed acceptance of the Divine commands but argued that beliefs were a wider arena that involved not only religion and the Divine commands, but other teachings too (for example, kindness and benevolence as praiseworthy acts are considered 'beliefs' rather than 'convictions'). The majority of the participants, however, took the two terms as overlapping, "Religious convictions about the benevolence of providing healthcare services in disasters form the basis of ethical performance". One participant said, "To me, performing whatever duties my religious convictions have asked for is the basis of ethical performance". Another participant said, "The religious aspects were of course very important. Our presence and performance there were a religious act".

Personal values: commitment

The majority of the participants considered commitment their main motivation for providing healthcare services in disasters and ascribed an external and an internal dimension to it. They remarked, "The sense of social commitment and providing services to others is the basis of ethical performance". Their sense of commitment was both toward themselves and toward other human beings, the community, the future generations, the organization for which they

worked and which enabled them to attend fields of disaster and mass casualty incidents, and also the rules and guidelines that governed their society. The participants ascribed a distinct threshold of commitment to each person and the majority also took personality type and the threshold of tolerance as influential internal factors while peer pressure and the emotions governing fields of disaster were regarded as external factors. One participant said, "Commitment has an internal dimension too, which means that if I don't have the knowledge to do a job, I shouldn't intervene". Some of the participants believed that commitment and obligation were not much different from each other and often used these terms together or interchangeably and proposed a number of dimensions for each of them. One participant said, "Sometimes, a given act is beyond your call of duty and responsibility, but circumstances are such that committing to its performance becomes an ethical act".

Personal values: benevolence

Benevolence was another personal value extracted from the interviews. The majority of the participants believed that actions based on benevolence are also necessarily ethical, "Having a humanistic view of those who receive services in disasters forms the basis of ethical performance". One participant said, "In 1987, we came across a bunch of wounded Iraqis; in that setting, issues like homeland, country and enemy prevailed. But I don't remember any hesitations before we went and helped them the Iraqis, cause, after all, they were humans too". Another participant who had helped in the Haiti earthquake said, "All I tried to highlight was that people should not be divided into Africans or Arabs, though the natives there really believed in such classifications. The job was to serve everybody in a humanistic and altruistic manner". Some participants believed that any discriminatory view on the provision of healthcare services in fields of disaster is unethical, "Providing services on a preferential basis and in view of ethnicity, race, fellow citizenship, etc., is just unethical". One participant believed that sometimes healthcare workers just pretend to be benevolent, "For the first two days after the Haiti earthquake, I worked with a European team. They didn't really know how to do the job, and only pretended to be benevolent".

Personal values: accountability

Accountability was another subset of personal values extracted from the interviews. The participants defined obligation and accountability as things toward which people knowingly and voluntarily take responsibility and hold themselves accountable. The majority of the participants believed that, in fields of disaster, performing duties is part of ethical performance. One of the participants said, "Anything beyond one's responsibilities is no longer considered a duty". Duty implies first the Divine commands of religion, and organizational principles and commands are second. Some of the participants believed that, although the outcome is what counts in an act of responsibility, one should perform his responsibilities regardless of the outcome, "We never thought if the procedures we were performing would be futile for the victims or not; it was our responsibility to perform the task regardless of the outcome". Some others considered the performance of responsibilities a conditional act that occasionally depended on environmental factors, "Sometimes an action is beyond one's responsibility and duty, but because of the conditions that prevail, performing it becomes ethical. For instance, pre-hospital emergency care does not entail transferring the deceased from the field of disaster; however, the emotional pressure on the one hand, and the command issued by authorities like the Governor or the Governor General (who have their own considerations in making these commands) on the other, make us perform the task anyways".

The threshold of tolerance

The threshold of tolerance was another personal factor extracted from the interviews. The majority of the participants believed that "Ensuring enough personal readiness for providing services is also part of professional ethics". The majority also asserted that, "The personal characteristics of the service provider affect his professional ethical performance". One participant stated, "Being shocked and confused can make the healthcare service provider's performance contradict his professional ethics". Another participant said, "Like, I occasionally noticed some people running away and leaving the area they were in charge of behind". Another participant remarked, "People were shocked, as if they hadn't yet taken in what had happened, where the wounded had come from; perhaps because it was the first time they had seen a factory being bombed".

Personal knowledge was another subset of personal factors extracted from the interviews, which included being trained, having experience and self-efficacy.

Personal knowledge: being trained

As for being trained, the majority of the participants believed that, "Prior training has a major role in healthcare service providers' ethical performance during times of disaster" and also that "In times of disaster, performing any action without the required knowledge is contrary to professional ethics". They considered training essential at any level, "Ongoing training facilitates the ethical performance of crisis managers". Some participants argued that "knowledge and experience form the basis of ethical performance.

Incompetent workers create problems for everyone" and "sometimes, the lack of knowledge leads to decisions based on impression alone, which is unethical. Training and education are required for acquiring knowledge". The participants also asserted that "not all training makes people wise and adept; instead, a good training is one that is based on principles and the latest technologies and takes into account people's abilities, environmental features and the national needs", or argued that "the difference between what happens in training and what happens in practice is part of the reason non-ethical performance even exists" and believed that "these are rooted in (poor) training. It is different on the field or in the community than it is in training". According to the participants, "Out-of-date training is also an ethical challenge".

Personal knowledge: experience

As for experience, the majority of the participants agreed that, "Experience affects ethical performance tremendously in healthcare service providers". Some of the participants believed that "the role of experience in ethical performance is more highlighted for certain parts of training" and that "to have an ethical performance, one should grow and evolve step-by-step and get through every stage of the experience". They did not consider experience as the mere result of trial and error or the personal resources accumulated from one's performance; rather, they also regarded the transfer of experience from other people as part of this capital. One of the participants said, "We responded very quickly to the Borujerd earthquake; we had learned many things from the Bam experience". Some argued that "the individual's frequency of exposure to such events increases his experience and enables him to manage the emotional atmosphere that prevails and affects his mood in times of disaster, which then affects his ethical performance too". Taking advantage of other people's experiences was another issue highlighted by the majority of the participants; one participant said, "I was then thinking about what other people in the world do for search and rescue", and another one stated, "Relief work…,well, it wasn't too bad, especially…; they had both foreign…and domestic experience"; and another one remembered, "We were all too fragile, except those of us who'd fully understood the depth of the war, those with 6 or 7 years of experience in the war, but not the rest".

Personal knowledge: self-efficacy

Self-efficacy was another factor in the category of personal knowledge that was extracted from the interviews. There was a great diversity of views about this factor: "Through the experience I had of the war, I knew I could, so I hurried into the car and separated them"; "I boldly went forward and said to them to bring over the injured… I have greater experience of dealing with the wounded and such than them"; "I was sure that I'd learnt something from dealing with accidents; I was very determined in my decisions and had no doubts"; "It was my obligation, especially since I saw myself as a person with an experience of the war; after all, I had been on the war front, and had greater experience with the wounded and such than them"; "We thought, well, this isn't our job. We stood and got involved, and resisted. We knew we were right"; "I was happy with a number of things … even with the little knowledge and experience I had, I knew I had learnt my skills right"; "I sensed that they couldn't take care of the job, they just had never done such thing and so didn't know how to, and so I wanted to go help out"; "Feeling worthwhile and successful is the basis of ethical performance".

According to the participants, self-efficacy entailed actual success in the new circumstances imposed by the disaster, making useful suggestions to others for solving problems in the new complex situations, self-confidence in taking responsibilities, satisfaction with one's own and the team's performance, a better understanding of the difficult situation at hand in order to make proper decisions and taking greater advantage of the minimum resources available for providing healthcare services.

Reflective thinking

Reflective thinking was another factor extracted from the interviews. According to the participants, this type of thinking refers to taking advantage of one's own experiences as well as those of others in a given situation and making use of both the desirable and undesirable outcomes achieved in past experiences for providing better healthcare services to victims.

The majority of the participants believed that learning from previous disasters affected their dealing with the present disasters, both in terms of how they performed personally during emergencies and how they interacted as a group. A large number of the participants believed that, "Having unresolved ethical challenges from previous experiences of disaster negatively affects one's ethical performance in the present crisis". One of the participants stated, "I was confident that I had learnt from previous incidents that saving people's lives is the most important thing, and I'd learnt how to make decisions in situations such as this one", and another participant said, "When distributing resources in disasters, you have to think of what you have done before and what you can do in the future; otherwise, your act has been unethical".

Discussion

The results of the present study were classified into five categories, including personal characteristics (age and gender), personal values (beliefs, convictions, commitment, benevolence and accountability), the threshold of tolerance, personal knowledge (being trained, having experience and self-efficacy) and reflective thinking.

The present study did not examine the effect of age on ethical performance in disaster healthcare workers; however, age is a factor that can increase the likelihood of physical and psychological health-threatening factors indirectly interfering with ethical performance. After adolescence, the individual has had greater interactions with the society and has more stable physical and psychological conditions and is therefore expected to make careful decisions that take every aspect of the matter into consideration and to perform more ethical acts. In their review study, Chiu and Spindel (2009) wrote," *Jenning and Hunt showed that young adults and adolescents are more likely to make unethical decisions and perform unethically. King and Rogers showed that ethical decisions are mostly observed among older adults and unethical ones among younger individuals. In this study, however, no significant differences were observed in decision-making and ethical performance by age, which may be due to participants being over 18*". The changes in physical and psychological conditions with age make older adults more likely to experience the negative effects of disasters and crises, which are then manifested in their ethical performance.

As for the effect of gender on ethical performance, it cannot be easily argued that ethical performance during disasters differs between men and women; however, the present study found ethical performance to be higher in men than in women. It appears that the distinct nature of disasters, especially at the time of occurrence and shortly after, make the job of dealing with them more of a male undertaking; however, there is no evidence to support this claim. The study by Chiu and Spindel (2009) also found no significant differences by gender in decision-making and ethical performance. Talebian (2001) argues that the careful selection of relief-workers for fields of disaster and the detailed study of the effect of factors such as age and gender on ethical performance are fundamental. Further studies are required to examine the effect of these factors.

The results of the present study emphasize the effect of beliefs and convictions on ethical performance during disasters. Although the Persian language takes 'belief' to also mean 'conviction' (Aryanpour Kashani 2006), in their modern usage, beliefs and convictions signify things about whose truth or accuracy the individual is perfectly convinced (Parsa 2004). In broader terms, beliefs contain knowledge, understanding, convictions and rituals, and have three main roots, namely personal experience, information extracted from others and deductions; beliefs may even be the concurrent product of these three sources (Bedar et al. 2010). Convictions are concerned with the rational dimension of humans (Tehrani 2011) and connote a mere mental acceptance and a form of surrender.

It appears that, in the absence of clear guidelines and under the influence of the exaggerated emotional atmosphere of a field of disaster, intuitively-extracted beliefs and convictions take over and guide people. This feature needs to be based on scientific data and experience in order to yield a better rigor; otherwise, the chances of the unity of direction, which is a crucial part of teamwork, especially in times of disaster, will be minimal. The thought of having every individual (even if trained) act according to his own preferences and his distinct training in these circumstances is concerning. Talebian (2001) believes that the careful selection of relief-workers for fields of disaster and the detailed study of factors that affect ethical performance, such as convictions, are crucial, and these factors should thus be taken into account in the selection of relief workers.

Commitment was another important finding of the present study. According to the participants, the initiation, continuation and stability of performance are based on commitment in times of disaster. According to the Medical Emergency Relief International, commitment to the medical team is a foundation of teamwork in disasters (Sharifi 2011).

Commitment means to take responsibility and covenant and to compel oneself to perform a task. According to the participants, commitment is an intrinsic determination governed by virtue to provide healthcare services with the best quality and in an adequate manner given the circumstances. The participants compared commitment to duty and argued that the former has a higher spiritual and ethical order, since an act may sometimes be beyond one's duty, but commitment may require that every effort be made to perform it.

Holt et al. believe in the significance of a collective or general consensus about ethical performance and considers ethical guidelines a source that guides ethical decisions in times of crisis. Medical ethics involve commitment and obligation to provide care to disaster victims (Holt 2008).

Benevolence was another finding of the present study. Benevolence indicates the avoidance of discrimination, even against the enemy in a war who now requires medical services. Benevolence enables healthcare service providers to serve people in difficult times and disasters without a hint of discrimination and encourages ethical performance; however, these definitions do not imply that any benevolent act is necessarily ethical. Sometimes, despite the benevolent motivations behind an action, internal or external factors such as the individual's emotional state or his lack of

adequate knowledge and experience cause harm to the victim or to others.

The results of the present study show that acting responsibly ensures ethical performance. Sometimes a certain act is beyond one's responsibility and duty, but the circumstances are such that necessitate intervention; or sometimes, acting responsibly is subject to the realization of one or more conditions that cannot be met, but intervening is essential due to the extreme conditions prevailing. Under such circumstances, the individual is faced with an ethical dilemma in his decision-making and his action is likely to contradict professional ethics. A study conducted in 2006 emphasized the need for an ethical framework that can help develop a disaster action plan and proposed ten ethical values that were necessary to the process of planning ethical performance. Acting responsibly was a priority that involved healthcare services provision (Barnett et al. 2009). Quoting studies conducted on 50 high-performance teams, Sharifi (2011) argues that being responsible is one of the eight main personal characteristics required for an individual to be employed in a high-achieving team.

The threshold of tolerance was another finding of the study. The results obtained confirm that capable experienced personnel are key to desirable outcomes in difficult times and disasters. The effect of personal characteristics on ethical performance is undeniable. A controlled study investigating the psychological state of rescue workers providing services to victims after the Bam earthquake showed high levels of stress and tension in the examined rescue workers, which may have affected the quality and quantity of the services they had provided; the researchers concluded that rescue workers need special services and support to perform better (Brati 2005). It is natural that people react differently to things that happen in a disaster; the present study found that, while some people run away from the site of disaster without even delegating their responsibilities, others are at first shocked for a while but then adjust to the new circumstances. In a study conducted by Safari and Eskandari (2005), 66% of the rescue workers involved in rescue missions after the Bam earthquake reported feeling perplexed and anxious, experiencing interferences with their job and having impaired decision-making abilities during the operations. Moreover, 43% reported to have experienced anger and resentment, while 17% experienced psychological problems such as mental weakness, extreme crying and physical frailty. Research suggests that knowledge and skills are essential tools for self-management in healthcare services provision in disasters (Sharifi 2011). The participants believed that certain factors contributed to the formation of this quality; some believed that the healthcare worker's personality is already shaped before he receives training for his job and the training he receives is not of great effect, some believed that frequent presence in fields of disaster increases one's threshold of tolerance and acceptance, and others regarded the absence of proper training and reality-simulation practices as responsible for the poor threshold of tolerance and acceptance and rescue-workers' personal vulnerability in disasters.

Another part of the results was concerned with the role of personal knowledge (being trained, having experience and self-efficacy) in healthcare service providers' ethical performance in mass casualty incidents and disasters. Early training on disaster action guarantees a more ethical performance. Gostin (2004) explains the paradox of maintaining public health in disasters, "Doubts in decision-making occur because of the inescapable lack of knowledge. The failure to make a definitive decision in the early stages of a crisis (such as in a flu pandemic) can have catastrophic ramifications".

The results obtained suggested that training should simulate the actual conditions as closely as possible; otherwise, the expansive gap between training and the reality of disasters increases the likelihood of unethical performance. Montán et al. (2015) emphasized the role of training in healthcare service providers' competence in achieving the set goals in disasters. Providing training does not make different healthcare workers equally efficient, because, in the absence adequate or standard training, individuals tend to base their decisions on their personal experiences, knowledge and preferences and the environment. This type of decision-making is not based on carefully-developed criteria in proportion to the complexity of the event. Training should therefore be up-to-date and healthcare workers must have adequate skills and knowledge about the new technologies available to them. Another finding of the study was the necessity of training at all levels, from managers to frontline-workers. Failing to train managers creates a pretext for unethical performance in healthcare service providers of all levels. In a study on the Bam disaster, Eskandari (2005) listed various factors that contributed to the high casualty rates in this earthquake compared to other similar incidents and discussed the shortcomings of the medical teams in the incident, including their insufficient training and their lack of rescue skills.

Having experience was another finding of the present study that was unanimously considered a key to healthcare service providers' ethical performance according to the participants. Experience can be acquired through frequent presence in collective disasters and incidents or by resorting to other people's acquired knowledge (whether foreign or domestic). The process of becoming experienced entails the step-by-step development of the individual. A person with little experience cannot be expected to assume the position of accident field manager only based on his networking skills and considerations such as connection with the authorities in charge. Lim et al. (2013) conducted a

2-month study on 1700 healthcare service providers and found that, of the 75.3% of those who believed they had sufficient academic readiness and skills for serving in fields of disaster, only 36.4% were truly ready and 74.5% acknowledged that adequate readiness was part of their professional competence. This articles proposed three factors as involved in the formation of true readiness, including the experience of presence in fields of disaster, the acting organization's readiness and the team's readiness. The experiences gained from one mass casualty incident can teach the individual the principles of standard performance in all disasters, and although every event has its own nature and characteristics, disasters of different types share various aspects, and the experience of one disaster can be used for dealing with other types of disasters as well. The results also showed that the proud soldiers of the Sacred Defense performed adeptly in fields of disaster, owing to the experience acquired during the war years. According to some of the participants, experience is the first step to acquiring knowledge. All organizations and directors can learn through experience and success and failure in addition to through systematic practice and organized plans (Sharifi 2011). Some others believe that knowledge and skills are the prerequisites of employment in disaster healthcare services and argue that disaster healthcare workers require knowledge and skills in different areas, such as in conflict settlement, problem-solving, the establishment and maintenance of communication, target-setting, performance management, planning, performance coordination and self-management (Borhani et al. 2011).

Self-efficacy was another finding of the present study. According to Albert Bandura, self-efficacy is the organization of previous skills in response to different demands in different situations with the aid of new techniques. Self-efficacy is a capability that allows the individual to organize his behavioral, emotional, social and cognitive skills and to coordinate them effectively for achieving his goals (Borhani et al. 2011). Some researchers define self-efficacy as a general concept involving the individual's confidence in his ability to survive different new situations, and as such, the capacity to effectively overcome stressful situations.

According to the findings of the present study, feelings of self-efficacy and worthiness can provide a solid basis for ethical performance. Irrespective of the motivation behind them, feelings of success, satisfaction, usefulness and efficiency are a solid backup for overcoming the dreadful feelings caused by presence in fields of disaster and the witnessing of catastrophic events that can expose the individual to serious ethical challenges in performance and decision-making. This perspective on oneself is caused by several factors, such as the knowledge and experience of disasters and having one's personal capabilities tested under similar catastrophic events. An individual with self-efficacy is confident that, in difficult conditions and crises, he can find his way out of decision-making and performance ambiguities. This confidence encourages him to take part and assume responsibilities on the field and increases the likelihood of an ethical performance.

Reflective thinking

Reflective thinking involves a careful, active and continuous attention to new information and their context and a consideration for the results and consequences of that information. Reflective thinking enables retrospection and prepares the individual for facing new complex situations. Moreover, it is a reassessment of previous performances and a way of collecting data and applying results to the current situation through analysis and judgment of processes and by examining the relationship between the new situation and what has been learnt from previous experiences. The participants believed that the lessons they had learnt from previous disasters affected their performance in all the later stages of the same disaster as well as future disasters. They believed that this effect could be positive or negative, since the previous event must be analyzed in its own setting in order for its real effects to manifest themselves. In other words, if it remains ambiguous whether or not a certain action has been ethical in a previous incident, the action may well turn into an ethical tension and cause the avoidance of fields of disaster in the future or may impair decision-making skills and ethical performance in service provision. In this study, people with a history of frequent presence in fields of disaster showed a certain courage and a high likelihood of ethical performance in service provision, which implied a conscious reliance on lessons learnt from previous experiences. For example, healthcare workers with an experience of war and the war front often reacted promptly and appropriately to what happened in a field of accident. People who had been present in several fields of disaster also reacted promptly to events that required immediate high-quality interventions, which suggests that the individual has learnt this particular type of thinking through an inner analysis of his previous experiences, which have prepared him for performing the present interventions in accordance with the professional principles of disaster healthcare service provision.

Conclusion

The results obtained showed that age and gender cannot be considered the only two personal factors affecting ethical performance in healthcare service providers; however, the effect of these two factors is manifested when they

are combined with other factors, such as personal characteristics, training, the prevailing culture, and the nature of the disaster. Despite the shortage of literature on the subject, the present findings can help develop a set of criteria (whether age or gender or other factors) based on which disaster healthcare workers should be employed from the entire social capital. In other words, a comprehensive disaster planning should benefit from the entire social capital in different phases of disasters. Personal beliefs and convictions are seen as both opportunities and threats for ethical performance. In the absence of a roadmap and performance guideline, the diversity of ways and trainings can lead to individual or group performances that contradict professional medical ethics. Until such guidelines are developed, overcoming this limitation requires a good strategy for the selection of disaster healthcare workers. Commitment is an important feature of professionalism that is formed through a process and does not emerge at once. Self-efficacy is an abstract concept that arises from one's understanding of a basic concept and is a reliable and flexible asset and capital that is in accordance with principles and has an instrumental value for understanding different requirements and performing ethically. Reflective thinking is a retrospective method of investigating past performances and comprises of skills put into practice based on the individual's analysis skills. The individual's view of phenomena determines how these tools are to be used and whether they make his performance ethical or unethical. The same rule applies to the threshold of tolerance. Ultimately, a set of personal characteristics and competences, including theoretical knowledge and experience, form the personal basis of ethical performance in healthcare service providers during times of disaster. The development of a practical guideline for disaster healthcare services and the principled selection of disaster healthcare workers and their proper training currently form the pillars of ethical performance in healthcare service providers.

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