

Original Article

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Professional Resilience among Trauma Emergency Department Nurses in Iran: A Qualitative Study

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Abstract

Introduction: Nursing staff's professional resilience plays an important role in overcoming the stressful and adverse situations common to the trauma emergency department and helps to achieve positive outcomes.

Objective: This study intended to explore the concept of resiliency among Iranian trauma emergency department nurses.

Methods: Data were collected using semi-structured interviews with 21 trauma emergency department nurses and analysed through a deductive content analysis based on the general conceptual model of resilience derived from King and Rothstein's study.

Results: All codes were nested into the four main categories of the above-mentioned model including: 1) Personal characteristics; 2) Opportunities, supports and resources; 3) Self-regulatory processes; 4) Positive outcomes. Some new sub-categories including Professional abilities (sub-category of Personal characteristics) and Cooperation with colleagues and Volunteers' declaration of readiness (sub-categories of opportunities, supports and resources) were developed in this study. In the positive outcomes category, three sub-categories including Improved professional abilities, Personal growth, and Job retention were developed.

Conclusion: Our results demonstrated that Iranian trauma emergency department nurses could achieve positive outcomes using specific affective, cognitive, and behavioural personality traits, professional abilities and effective external supports from different resources during self-regulatory processes. It is suggested that nurses should be selected for work in the emergency department based on appropriate characteristics and skills.

Key words: Emergencies; Emergency Service, Hospital; Nurses; Resilience, Psychological; Trauma

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INTRODUCTION

Emergency department, due to its unpredictable and stressful nature, has the potential to pose emotional challenges in the involved nursing staff (1). At times of patient overload, the emergency department nurses' stress substantially increases, which may be due to limited patient care time, work overload or psychosocial reasons (2). Even though the emergency department environment's excitement and challenges attract the talented and motivated nurses, the continued stress causes negative physical and emotional impacts on the personnel (3). A study by Frankenberger (2014) demonstrated that emergency department nurses are exposed to some serious profession related stressors that have potentially negative effects on the nurses' psychological health and in turn on the

patients' care (4). The nurses in charge of the care of the traumatized patients may suffer severe and traumatic emotional responses that if left unrecognized and handled improperly will lead to compassion fatigue (5). Lim et al (2010) introduced other stressors besides the work overload such as occupational conflicts and violent experiences in their study (6). The management of negative emotions in one's self as well as in colleagues involved under the serious emotional load is devastating (7). Moreover, the nurses are supposed to show compatibility with challenging conditions while maintaining effective function (8). Jackson et al (2007) believe that nurses are required to have resilience to be successful in their profession, as the work conditions can become quite difficult (9).

Resilience is the process of positive stress compatibility utilizing personal and environmental factors and resources (10). Fischer et al (2019) state that workplace difficulty may be the result of a very stressful situation such as a disaster, or it may be caused by minor recurrent stress over a longer period as seen in different types of professional stress (11). Professional resilience is a combination of characteristics, processes and support systems that enables the individuals to return to their previous functional status or health conditions after a traumatic incident at their workplaces (12). Higher levels of resilience among the nursing staff lead to increased overall health, psychological health, improved work interactions, improved professional lifestyle and higher professional satisfaction (13-17). King and Rothstein (2010) presented a model of resilience by conceptualizing it as a multidimensional construct and a set of protective factors and dynamic self-regulation processes in the emotional, cognitive, and behavioral domains contributing to a person's return to the desired functional and health levels. The development of this model was based on the review of the studies on protective factors in various groups (10). Their model used a self-regulatory, meaning-oriented approach for recovery and personal growth processes after serious workplace difficulties (12). Creating a resilient workplace can help reduce negative outcomes and increase positive results of the workplace stresses in the health services related professions (18). However, our current knowledge about the nature of the concept of resiliency in emergency nurses is still limited. A qualitative study on the occupational resilience in trauma emergency nurses provides an opportunity to increase our knowledge of their coping mechanisms with their workplace difficulties and the continuation of their career. This study was designed to assess the resilience of trauma emergency department nurses in Iran based on the general conceptual model of resiliency adapted from King and Rothstein study (2010) and identify the factors affecting their professional resilience.

METHODS

Research design

Our qualitative study utilized the deductive content analysis approach suggested by Elo and Kyngäs (19), to assess the Iranian emergency department nurses' perception of the concept of professional resilience. In the qualitative content analysis method, the gathered data are systematically classified and their explicit and hidden themes and

patterns are identified. In the deductive content analysis approach, either the researcher uses the available theories or based on reviewed literature he/she forms a conceptual framework to develop an initial coding scheme. With the progression of the analysis, additional codes are developed and the design of the primary codes is revised and refined (20).

Setting and participants

Participants in this study were emergency department nurses. The sampling method was purposive. The recruitment process was done at two trauma centers in two Iranian Provinces (Kermanshah and Alborz) to ensure maximum variation of the study sample. The inclusion criteria were willingness to participate and a minimum of 2-year full-time work experience as a trauma emergency nurse. Sampling was continued until reaching data saturation and obtaining no new data (21).

Data collection

Semi-structured individual interviews were conducted by the first author (RN) using a guide that included open-ended questions focused on the purpose of the study. The interviews were started with the question: "Would you please explain your experiences of working in trauma emergency department as a nurse?" Afterward, specific probing questions based on the main categories of the general conceptual model of resiliency adapted from King and Rothstein (2010) were used; e.g.: "How did you deal with these situations?", "What characteristics do you think helped you cope with these situations?", "What else has helped you apart from your own characteristics and abilities?". The time and the place of the interviews were determined according to participants' preference. All interviews were recorded using a digital sound recorder, which were immediately transcribed verbatim after each interview session. The interviews lasted from 15 to 45 minutes. Data were collected and analyzed simultaneously from March 2019 and November 2019.

Data analysis

Data analysis was performed using the deductive content analysis approach proposed by Elo and Kingas (19), which includes the preparing, organizing, and reporting steps, which includes the preparation, organizing, and reporting steps. During the preparation phase, after each interview, the transcribed text was read several times to allow immersion into the data. Each interview was divided into semantic units then summarized and coded. In the organization phase, to analyze the data, the researchers developed an unconstrained

matrix based on the general conceptual model of resilience derived from King and Rothstein’s study (12). The primary codes related to the pre-defined categories and subcategories were then assigned. Codes not included in these subcategories were added to the new ones based on similarities and assigned to the corresponding main class. The first author performed data analysis and other authors monitored the data analysis process. To reach a consensus in case of a disagreement among the authors regarding the generated codes and subcategories, group discussions were held. The MAXQDA 10 software was used in the data analysis process to facilitate organizing, classifying, and retrieving data.

Rigor

Prolonged engagement with data, member checking, and peer checking were the established credibility of our findings. Moreover, transferability of the findings was obtained by sampling from two trauma centers in two different Provinces.

Ethical considerations

This study was a part of PhD dissertation approved by regional ethics committee affiliated with Isfahan University of Medical Sciences, Isfahan, Iran (decree no: IR.MUI.RESEARCH.REC.1398.272). After explaining the aims of the study to the participants, they were informed that they could withdraw from the study at any time. The written informed consent form of the study was read and signed by participants. Moreover, we changed the participants’ name to codes and they were assured of the confidentiality of their names.

RESULTS

Fourteen female and seven male nurses with an average age of 38.38 including 17 trauma emergency department nurses, 3 trauma emergency department supervisors, and 1 trauma

emergency department head nurse, participated in this study. Of the 21 participants, 17 nurses had bachelor's degrees and 4 had master's degrees. Mean total work experience and mean trauma emergency department work experience were 21.17 years and 6.35 years, respectively. In the data analysis process, four generic categories based on the general conceptual model of resiliency adapted from King and Rothstein (2010), were developed: 1) Personal characteristics; 2) Opportunities, supports, and resources; 3) Self-regulatory process; and 4) Positive outcomes. The categories and sub-categories are shown in table 1 and are explained below.

Personal characteristics

The participants discussed traits that fell into the four subcategories of emotional, cognitive, behavioral, and professional abilities. To meet the requirements of our study, subcategories of professional abilities were added to the original model.

• **Affective individual differences**

Participants cited characteristics that showed high level of patience, self-sacrifice, altruism, excitement, interest in the nursing profession, empathy, and compassion. *"I rushed to the hospital at the time of the earthquake. That is, I was in the hospital for 21:50. From that moment until the next day, I did not sleep till 23 pm and did not go home."* (Participant 3).

• **Behavioral individual differences**

In the behavioral domain, our participants pointed to some characteristics such as responsibility, professional enthusiasm, interest in teamwork, precision, promptitude, professional commitment, self-efficacy, interest in work challenges. *"... I enjoy challenging myself; I don't like repetitive and repetitive work..."* (Participant 8). *"Well, I think I am strict as I am in my personal life."* (Participant 16).

Table 1: Categories and sub-categories of nurses’ professional resilience

Category	Sub-category
Personal Characteristics	Affective individual differences
	Behavioral individual differences
	Cognitive individual differences
	Professional abilities
Opportunities, Supports, and Resources	Cooperating with colleagues
	Social support
	Volunteers’ declaration of readiness
Self-regulatory process	Affective strategies
	Cognitive strategies
	Behavioral strategies
Positive outcomes	Improved professional abilities
	Personal growth
	Job retention

- **Cognitive individual differences**

A number of the characteristics of the participating nurses fell under the cognitive domain, such as conscientiousness, work conscience, decision-making ability, self-control ability, and self-management ability. *"When a patient is under my care, I always imagine it could have been a family member of mine, how would I have liked them to be served if that had happened to them ..."* (Participant 11).

- **Professional abilities**

We introduced the subclass of professional abilities in our study. In this sub-category, the nurses mentioned high skill, sufficient knowledge and information, work experience, ability to manage mass casualties, and communication skills. *"You have to be agile, the pace of the work is great ...", "You have to be highly accurate otherwise you falter and may make mistakes that are even fatal. These have happened and you really need to be highly skilled."* (Participant 11).

Opportunity, Support, Resources

Participants mentioned resources, opportunities, and support, which depending on their field of occupation fell under one of the 3 sub-categories of cooperation with colleagues, social support, and volunteer's declaration of readiness.

- **Cooperation with colleagues**

Nurses in our study mentioned that the collective support available in the emergency department among nurse and physician colleagues strengthens the group, facilitates the service delivery process, and reduces stress. *"Another thing is that activities in emergency department are mostly based on teamwork, the emergency department staff strengthens themselves very well, and they like to work together because they work as a team."* (Participant 3).

- **Social support**

Nurses in our study also mentioned the supportive role of family members, friends, and their colleagues in reducing stresses. *"I talk a lot with my husband and he understands me and makes me relaxed because he works in EMS as a paramedic."* (Participant 17). *"Our supervisor is a very nice woman. She is very knowledgeable and experienced in every way and she helps me and cheers me up whenever we discuss work-related stuff."* (Participant 16).

- **Volunteers' declaration of readiness**

Another resource mentioned by our nurses was volunteering nurses inside or outside the hospital in times of crises-made patient overload. *"After the earthquake hit, there were too many volunteers from*

every stratum, even those who could not provide any services at all, and both from the inflicted province itself and from other parts of the country." (Participant 21).

Self-regulatory process

Our participants mentioned self-regulatory strategies in three affective, cognitive, and behavioral sub-categories.

- **Affective strategies**

The nurses in this study pointed to items that were valuable in expressing self-awareness, control over the emotions, sense of humor, and satisfaction over performing a valuable task. *"... Whoever works here [emergency department] will have to deal with the pain and discomfort of the patients and resist being affected by it. That is the only way one can perform properly..."* (Participant 2).

- **Cognitive strategies**

The participants believed that understanding the realities of their profession over time, having a realistic view of the nature of working in an emergency department, separating work and life issues, balancing work and life, analyzing problems and finding the best solutions, confidence to overcome the professional environment hardships, gave meaning to nursing work. *"... I love my job. You know, my job is meaningful because can help others and I play a role in saving someone. It is really valuable to me ..."* (Participant 15).

- **Behavioral strategies**

In the content analysis in this study, strategies such as exercise and physical activity, performing amusing and artistic activity, applying relaxation, meditation and yoga techniques, spending time with family and loved ones, reading, confiding in someone, listening to music, praying, and traveling, were mentioned. *"I spend time with my dear ones, I pray faithfully, I read books, I go to the pool sometimes, I perform relaxation techniques ... They calm me down."* (Participant 13).

Positive outcomes

The participants divided trauma emergency department workplace resilience outcomes into 3 sub-categories of professional competence, personal growth, and endurance.

- **Improved professional abilities**

Almost all participants stated that working in the emergency department and exposure to a variety of injuries and illnesses increased their close and intimate contact with physicians when performing medical and clinical procedures. *"Another point is we can learn many things in an emergency department. I learned a lot when I came into the emergency department and began my carrier as an*

emergency department nurse." (Participant 10).

- **Personal growth**

Other items that nurses in this study noted were increased skills such as communication skills, assertiveness, and increased confidence after they began their emergency department carrier. According to a number of them, increased exposure to patients and their companions, and the need to interact with and manage these interactions increased these skills. As their knowledge and skills increased, their confidence was boosted too. *"Working in the emergency department boosts your confidence ..."* (Participant 14). *"My social relationship has been improved a lot after I started working in the ED ..."* (Participant 17).

- **Job retention**

Persistence in the nursing profession, especially in the emergency department if driven by personal interest rather than compulsion can mean a positive consequence of resiliency, as we observed in most of our study participants. They were interested in their jobs and reluctant to work in another ward. *"I really like working in the emergency department and I have no intention of working in other departments. I like both the type of work and our work atmosphere ..."* (Participant 3). *"Emergency department is a dynamic department, it's alive ... well I like it, I love working in this environment"* (Participant 10).

DISCUSSION

This study was conducted based on the general conceptual model of resiliency derived from King and Rothstein's study (12). We intended to study the perceptions of Iranian emergency nurses of their professional resiliency. To our knowledge, this study is the first study done using this approach. Trauma emergency department nurses' experience regarding their workplace resiliency demonstrated several effective factors. Using specific personality traits in a variety of emotional, cognitive and behavioral areas, and professional abilities that combine knowledge, skills and experience, along with external support including colleagues' cooperation, psychosocial support from their family, friends and co-workers, as well as the presence of volunteer professionals during major events are factors influencing the professional resiliency of trauma emergency department nurses. These factors lead to positive outcomes of self-regulation in nurses' emotional, cognitive, and behavioral domains. These consequences are reflected both in the profession and in the personal lives of nurses. In the individual characteristics category, in addition to confirming the basic model

of nurses' personal characteristics in emotional, cognitive and behavioral domains, a new subcategory of professional abilities was created according to the nature of the nursing profession. According to King and Rothstein's study, the characteristics of the emotional domain relate to one's abilities that provide a sense of emotional well-being. In the cognitive domain, worldviews and expectations are intended to create a sense of coherence. The behavioral domain also relates to self-efficacy and other characteristics that create a sense of agency (10). These characteristics have been mentioned in other studies with the same wording or with slight differences. For example, McGee study cites self-esteem, ingenuity, self-discipline, curiosity, flexibility, problem-solving skills, and emotional endurance (22). In another study, individual characteristics such as purposefulness, religious or any other kind of belief, empathy, insight, and self-care were presented (23). Other researchers mentioned flexibility, adaptability, and emotional intelligence (24, 25). Other studies have also addressed specific psychological factors such as self-reflection, determination, and self-esteem and self-control (24-26). Hartman et al. found that positive emotions are among the factors that play an important role in enhancing resilience at both the individual and team levels (27). Self-efficacy is one of the most important components related to resilience mentioned in many studies (24, 25, 28, 29). Coping skills are another vital source for a profession that has been mentioned in various studies (24, 28, 29). Perseverance and uneasy compromise, psychological empowerment, optimism, and hope have been mentioned as protective factors (24, 25, 30-32). In our study, we created a subclass called professional abilities that played a role in the resiliency of emergency nurses. In the general conceptual model of resilience derived from King and Rothstein's study, a separate subcategory for professional abilities is not included, but different studies provide different views on this matter. An example of these studies is the Gillespie et al. study (24). Following their research, they concluded the nurse's work experience was unrelated to his/her resilience, but in contrast, other researchers found that personal resources such as work skills or the ability to manage job demands effectively or business confidence have positive relationship with resilience (33-35). In their view, these qualities make employees more resilient and motivated and give them the feeling that they have improve in terms of dealing with challenges. There were no

explicit sub-categories defined in the external resources and support category, in the general conceptual model of resilience derived from King and Rothstein's study (12). In the present study, three subcategories were developed that fully aligned with the concept of the core category defined as colleagues' co-operation, psychosocial support, and volunteer readiness. In emergencies and disasters, various factors make the situation very stressful for nurses. Our participants believed that working together within the treatment team was a great help in reducing stress and responding effectively. This is also found in the results of previous studies. According to the Lin et al. study, insufficient support from higher authorities leads to emergency department nurses relying on their co-workers, as reported by Tubbert, that found that the connectedness of interpersonal connections was a strong predictor of resilience and of overcoming the hardships (18, 36). Sharing responsibilities and tasks with colleagues reduces the burden of challenging situations (37). There have also been numerous studies on social support including job resources and its effective role in reducing depression, enhancing positive attitudes to life and increasing resilience (38, 39). Interpersonal relationships play an important part in enhancing resilience at both the individual and team levels (27). Social support for individuals provides them with a chance to talk about work and the stressful workflow experiences and debriefing after the challenging experiences in their workplaces (33, 40). Hart reported that good social resources and support can help nurses reduce emotional exhaustion and burnout, so staying in the profession is increased (25). In other studies, social support and positive social relationships were also included as external protective factors and considered as a means of coping with job stress (41-43). There are different opinions about the role of support from family and friends. According to Todt et al., social support from colleagues and supervisors can increase resilience, but the support of family and friends does not have any effects (44). Jensen et al., however, claims that powerful professional and private social networks enforce resilience (34). According to Hartman et al., this discrepancy may be due to different environments studied this discrepancy may be due to different environments studied (27). However, Gillespie et al., argue that there is no relationship between social support and resilience (24). The researchers, with the data acquired from professional sources, found out that social support and professional feedback had a

positive relationship with resilience (45,46). Other factors that play a significant role in the event of major accidents and disasters include the readiness of volunteers from various medical teams, including nurses, who are ready both inside and outside the hospitals and other centers to offer help and cooperation with the involved personnel. In Iran, there is always a great deal of empathy and cooperation between people in different groups when disasters strike. If there is proper management of human resources and if there is enough space and equipment, these qualities can be quite effective and efficient. In the category of self-regulation processes, three sub-categories of affective, cognitive, and behavioral strategies were consistent with the general conceptual model of resilience derived from King and Rothstein's study. King and Rothstein believe that resilience or 'bounce back' is achieved through self-regulatory processes that act on emotions, thoughts, and behaviors. They claim that in desirable human development, individuals have a set of self-regulated strategies that allow them to adapt, or adjust with unforeseen conditions (10). Many of the findings of our study are in line with the results of previous studies. Evidence shows that sense of purpose and meaning, professional commitment, positive emotions, maintaining a positive attitude through humor, strategies such as seeking support, problem-solving and self-control, prided themselves on their ability to do professional work quickly, also reinforces resilience (6, 13, 18, 33, 47, 48). Proper work/life balance by providing rest and social relationships and enhancing exciting leisure activities, socializing with friends, enjoyable activities, spiritual activities and living in the moment provides conditions for reinforcement that enhances resilience (34, 49, 50). In the Happel's study, adaptive coping strategies such as sports, home activities, family activities, virtual social networks, and the use of staff social clubs by nurses were mentioned (43). All emotional, cognitive, and behavioral indicators of positive life outcomes fit in the category of resilience outcomes of the general conceptual model of resilience derived from King and Rothstein's study (12). In our study, these indicators fall into three sub-categories of professional empowerment improvement, personal growth, and career retention. Lin et al. state that many participants entered the nursing field simply because of their desire to work in the emergency department as their first career choice (18). They believed that doing so would help people and increase their knowledge. However, the results showed that the

participants were very eager to enter the nursing profession, but they did not achieve much and only internal emotions and personal beliefs helped them to stay in the profession rather than external ones. Finally, studies have shown that staff resiliency is positively associated with their job performance, organizational commitment, and work engagement (51-53).

Recommendations

Based on the results of this study, it is suggested that nurses should be selected to work in the emergency department based on specific characteristics as well as the requirement to undergo specific training while having gained skills and experience in other wards before working in the emergency department. Hospital officials can select qualified nurses working in the emergency department with the appropriate tools, and evaluate their skills through objective tests such as Objective Structured Clinical Examination (OSCE) exams.

Strengths and weaknesses

In this study, we attempted to increase the chances of transferability by sampling emergency department nurses from two hospitals in two provinces from both sexes.

CONCLUSIONS

The findings of this qualitative study indicate that Iranian trauma emergency department nurses can achieve positive outcomes of resilience during self-regulatory processes in emotional, cognitive and behavioral domains. In these processes, they are required to have various especial personal traits

and professional abilities, a combination of knowledge, skill and experience. Furthermore, they must have the external support including colleagues' cooperation, psycho/social support from family, friends and colleagues. Besides, the availability and the presence of professional volunteers during major incidents and disasters help them cope with these conditions effectively. The trauma emergency department nurses try to cope with their difficult working conditions by making sense of their profession and paying attention to its non-material aspects, but it seems that if difficult conditions persist, which can be moderated by effective management, this view will not last.

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AUTHORS' CONTRIBUTION

All the authors met the standards of authorship based on the recommendations of the International Committee of Medical Journal Editors.

CONFLICT OF INTEREST

None declared.

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