

Optimizing care strategies for patients with trauma emergencies: a qualitative study

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Abstract

Background: Optimizing care processes, especially in the emergency trauma departments, is considered an important issue in health care systems. Moreover, exploring strategies with the participation of stakeholders can significantly affect patient outcomes.

Objectives: This study was conducted to identify, prioritize and optimize care strategies for trauma and emergency patients in Shiraz, in 2019.

Methods: Data using semi-structured interviews, Focus Group Discussions, and executive meetings with managers were collected, and the prioritization matrix was used to optimize strategies. Sampling was done purposefully until data saturation. The collected data were analyzed using qualitative inductive content analysis.

Results: 26 necessary corrective and preventive strategies were mentioned. After analyzing the data, various strategies such as rectifying managerial issues of the emergency system, specialized trauma nursing care, enhancing trauma emergency response preparedness, and adoption of a team approach were proposed.

Conclusion: The exploration of care strategies using employee participation provides to facilitate the development of care processes, especially in complex spaces such as trauma emergency wards. Therefore, the healthcare authorities such as nurse managers should pay special attention to these strategies. Moreover, nurses should provide more effective care in the trauma emergency departments based on the appropriate and applicable strategies.

Keywords: Emergency care, Trauma center, Quality improvement, Strategies.

Introduction

Trauma is one of the leading causes of death worldwide. It affects the young population more than any other risk factor and in addition to the physical and psychological effects, it imposes a great financial burden on the patients and the society.¹ High mortality, morbidity and disability have been reported during the initial hours after airway injuries, respiratory failure, or uncontrolled bleeding caused by a trauma. Performing fundamental measures can prevent a considerable portion of these complications in order to expand and develop care programs.¹⁻³

The patient care process is considered as the basis of nursing services and the most important feature and value principle in the nursing practice.⁴ Patient care is a set of interconnected activities and actions that are designed and implemented to positive changes in the patient's condition.⁵ Today, the quality of nursing care is one of the challenges of

health care, especially in emergencies where the quality of care is an indicator to maintain and promote the health status of patients.⁶ Quality of nursing care means meeting the needs of patients through targeted care with appropriate communication, support, mutual respect, responsibility, and accountability.⁷

However, most of the previous studies indicated that there are a wide range of problems in the proper care of patients. In 2016, Beyrami et al., reported some problems regarding emergency service providers, such as inadequate personnel and high workload, and job dissatisfaction of nurses.⁸ Mirhaghi et al. demonstrated the lack of obligation for trauma ward nurses to undergo training, treatment for trauma patients, and the use of evidence-based decisions in the clinical setting.⁹ Chen et al. and Pashaei reported that there are some challenges such as insufficient knowledge of nurses, lack of trauma nurse, lack of application of

international standard guidelines in trauma wards.^{10,11} Khademian et al. showed that inability, motivation, clinical reasoning, and insufficient staff in trauma emergency departments are among the challenges of the trauma care center.¹² Also, Safazadeh et al showed that there is a gap between the theoretical and practical fields in nursing as an effective challenge on the proper care of patients in emergency care departments in Iran.¹³ Currently, the quality of care programs related to traumatized patients has become a main challenge in healthcare systems and is indicated as an index of maintaining and enhancing patient care.¹⁴ Most of the previous related studies have been conducted in developed countries, which have more resources to provide care for such patients. In this regard, they are generalizable to other developing countries.¹⁵ Based on the results of the mentioned studies and the problems related to providing nursing care in trauma emergency departments, it is necessary to clarify the strategies to improve them. Clarifying problems and applying strategies to improve trauma emergency nursing care, in addition to improving patient health indicators, can also be beneficial to the organization and caregivers.¹⁶ Through strong evidence-based studies, research in developed countries mostly emphasizes on the necessity of preparing standard care strategies and their role in saving patients, preventing trauma-related damage, and increasing the patients' quality of life.^{17,18} However, previous studies in Iran have shown that although various organizations work in the areas of prevention, management and rehabilitation of patients with trauma, there are clear shortcomings in the existence of laws and optimization approaches in providing care for these patients,^{19,20} and most of the previous studies in this field have focused on pre-hospital care.²¹⁻²⁵ Therefore, due to the need for proper management of these patients, especially in medical centers, various measures such as formulating strategies to meet the needs of patients are severely impaired, and hence the complexities of how to care for these patients can be overcome.²⁶ The results of this study can be effectively used for reducing practical challenges based on the existing resources and facilities and increasing the practical knowledge and empowerment of nurses in relation to the phenomena they face during care. Moreover, the results of this study can improve the provision of clinical care services, teamwork, communication, clinical management, and the quality of the health system through providing opportunities

to strengthen the professional performance of nurses. Improving this process can also increase the satisfaction of patient and staff and subsequently improve the care process, outcomes of trauma patients, and reduce the detrimental effects of trauma.

Objectives

This study aimed to explore and prioritize the strategies of optimizing care for severely injured trauma patients based on stakeholder's perspectives and experiences, culture, patients' needs, with paying attention to the characteristics of the care setting and care providers in order to improve the nursing care process.

Materials and Methods

In the present study, data were collected using semi-structured interviews, Focus Group Discussions (FGD), and executive managers' meetings. Then, one executive manager's session was held for applying the managers' decision-making power. The subject of this session was the re-evaluation of measures taken to optimize caring for patients with trauma emergencies. In order to prioritize strategies, the SFF matrix was used in which the participants were asked to score the suitability, feasibility, and flexibility of each strategy (from 1 to 3). On this scale, a score of 1 indicated the lowest and 3 indicated the highest agreement. In order to analyze the qualitative data, content analysis was used based on Elo and Kyngas's method,²⁷ which consisted of three sections including the preparation phase, organizing phase, and reporting of analysis process and results.

This study was a part of action research that was conducted in the Shahid Rajaei Hospital, Shiraz, Iran in 2019, as the only specialized trauma emergency center in southern Iran with a daily admission rate of 130 trauma patients.

The inclusion criteria were having at least three years of work experience in trauma wards and at least a bachelor's degree in nursing. We enrolled 19 participants and the sampling continued purposefully until data saturation. The participants included nurses working in the trauma emergency department, head nurse, emergency supervisor, specialist physician, anesthesiologist, educational supervisor, matron, and emergency physician. The texts of interviews were reviewed several times after recording, and the codes were extracted and allocated to subcategories based on similarities and differences. For data analysis, MAXQDA 10

was used. The trustworthiness of the qualitative data was assessed using Lincoln and Guba’s criteria²⁸ including member checking, prolonged engagement and persistent observation, audit, peer check, member check, correct interview and recording techniques, documentation, complete description of the research process, exact description of the participants’ characteristics and stating their opinions. We also used Waterman’s method for evaluating trustworthiness by holding various meetings, constant comparison, bracketing, and reflection.²⁹ The above mentioned stages are described as follows.

Data collection

In this study, data were collected using semi-structured interviews, Focus Group Discussions, and executive managers’ meetings. For this reason, initially, seven individual interviews were conducted with the participation of nurses. In this stage, in order to increase participant concentration, the challenges of the trauma emergency department were presented to the participants using the fishbone diagram, which was mentioned in details in another article³⁰ (Figure-1).

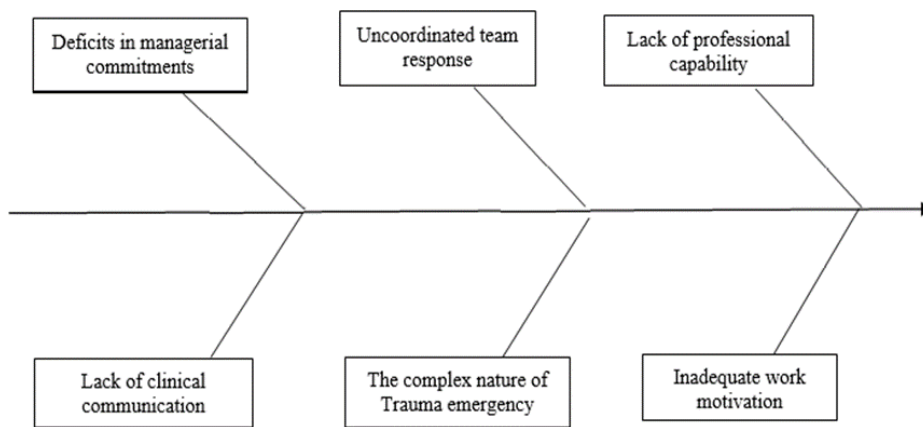


Figure-1. The challenges of the trauma emergency (fishbone diagram)

Then, a set of necessary measures were taken to solve the challenges. To collect necessary measures to optimize care for patients with trauma emergencies, we began by asking general questions and continued with in-depth questions to clarify participants’ statements. Each interview lasted about 35-47 minutes. Sample questions were as follows: How can improve the care process? And what effect would it have on patients’ outcomes?

An FGD was also held to complete the necessary steps to optimize care and extract subcategories. There were six participants, including two nurses, a head nurse, an emergency supervisor, a specialist, and an anesthesiologist. The meeting lasted about 98 minutes.

Then, one executive manager’s session was held for applying the managers’ decision-making power. The subject of this session was the re-evaluation of measures taken to optimize caring for patients with trauma emergencies. The extracted sub-categories as well as the main categories and strategies were used and prioritized. Eight participants including three ward nurses, a head nurse, an emergency

supervisor, an educational supervisor, a matron, and a physician in charge of the emergency department participated in this section, and only two of them had previously participated in focus group session.

To prioritize strategies, the SFF matrix was used in which the participants scored suitability, feasibility, and flexibility of each strategy (from 1 to 3). A score of 1 indicated the lowest agreement and 3 demonstrated the highest agreement.³¹ Suitability indicates the necessity of any strategy to improve the process and feasibility means the ease of applying each strategy according to resources, number of people, cost, and time required and ultimately flexibility means the ability to respond to unattainable conditions and enables change of actions taken while doing the job.

Data analysis and trustworthiness

To analyze the qualitative data, content analysis based on Elo and Kyngas’s method was used, consisting of three sections: the preparation phase, organizing phase, and reporting of analysis process and results. Thus, each interview was recorded, and the topics discussed in the FGD

were implemented. They were read many times by the researcher and the semantic units were extracted and coded based on the text of each interview. Then, similar codes were placed in subcategories. The subcategories were then combined, and the main classes or strategies were extracted. The MAXQDA 10 software was used for the data analysis process to facilitate and assist in organizing, classifying, retrieving an initial and final coding of qualitative data. Analyzing each interview was done by researchers independently. Strategies were prioritized using quantitative statistics, and after collecting the scores of each participant, the average scores of the calculations and strategies were prioritized.

The trustworthiness of the qualitative data was assessed using Lincoln and Guba's criteria, including credibility, transferability, confirm ability, and dependability.³² Credibility was founded through peer check, member check, prolonged engagement, and constant comparative analysis. Member checking was done by asking the participants to ascertain findings from the earlier interviews. Prolonged engagement with the data for more than one year and giving reflective commentaries and constant comparative analysis was done from the first to the 17th interview and resulted from differentiation in the categorization of data. In this study, many direct quotes from the participants and a detailed description of the whole research process were provided in order to obtain transferability. Conformability was obtained by asking 3 participants to compare the results of the study with their own experiences. Moreover, dependability was achieved by document retention and submitting the original data to the main category for researcher team members.

Ethical Statement

Research ethic board of Social Welfare and Rehabilitation Sciences University Tehran-Iran approved the protocol of the study (IR.USWR.REC.2019.169). 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 replaced the participants' names to codes and they were reassured that their information and identity would remain confidential.

Results

Seven people participated in the semi-structured interview

and 12 participated separately in FGD and executive group meetings. Of these, five (26.4%) were men and 14 (73.6%) were women. The mean age of the participants was 34 ± 3.5 years with a mean work experience of 9 ± 6.1 years. Also, 15 individuals (78.9%) had a bachelor's degree and four participants (21.1%) had higher degrees. 26 actions were approved by the participants, and finally, 8 subcategories and 4 main categories were extracted as relevant strategies (Table-1).

The results of prioritization and optimization strategies for caring of patients with trauma emergency based on the mentioned matrix were as follows: correcting management of the emergency system, specialized trauma nursing care, enhancing preparedness for trauma emergency response, and organizing trauma teamwork performance, respectively. The mean scores of the participants' comments regarding the mentioned strategies and their prioritization are shown in (Table-2).

Rectifying Managerial issue of the Emergency System

Most participants described rectifying the managerial issue of the emergency system as an important strategy for enhancing care quality.

From the participant's viewpoints, effective management was an important factor in improving performance and correcting activities to attain desired goals. Moreover, they believed that proper control of the care process by managers especially in crises can lead to better job motivation, adequate workforce and equipment, and ultimately assure that care is suitably and correctly provided.

Efficient management of human resources and supplies

The participants identified appropriate equipment as a reinforcing factor in how patients are treated.

A nurse, with three years of experience, said: "When there is enough nurses and equipment in the ward, no one has an excuse to do less, so they can take care of the patient with more focus." A nurse, with four years of work experience, said: "The fact is that not only the number of staff but also the number of devices in the ward must be compatible with the number of patients, they have to plan for that because it all affects how I work as a nurse."

Nursing manager support

Nursing manager support is one of the effective factors expressed by the participants that can enhance the care process. According to them, motivational factors are among

the basic needs of every human being and can affect people's caring behavior.

Many of them considered financial support as one of the most important factors in improving the job motivation of employees and the process of providing care. A female nurse with six years of experience said: "If the authorities care about our works, then our demands should be important to them as well. It lifts our spirit. Sometimes we need psychological

counseling because of our emergency context" A male nurse, with four years of experience, said: "which action motivates me to take more shifts? and How much I am supported by the manager? It's better to pay more attention to our basic needs, rewards, payments and a good place to rest. In this way, everyone feels the manager's support and is more motivated to stay here and do their job better."

Table-1. The development of a Main categories and strategies

Open codes (actions)	Subcategories (classifying actions)	Main categories (strategies)
-Articulating professional actions - Needs assessment for specialized trauma training	Need for continuous training	Specialized trauma care
-Providing continuous trauma education programs -Certified Trauma Nurse Specialist -Providing Advanced Trauma Care for Nurses(ATCN) and Advanced trauma life support for Physicians (ATLS) course		
Compiling specialized trauma care booklets -Preparing specialized trauma care algorithms	Specialized clinical protocols	
--Enhancing prehospital reporting process -Activating hot lines for patient admission -Reforming the admission process for severely traumatized patients	Development of initial trauma care process	Enhancing trauma emergency response preparedness
- Enhancing handover and shift-to-shift handoff documentation -Extracting indices related to emergency trauma care process -Measuring/controlling and documenting the extracted trauma emergency indices	Promoting Trauma Emergency documentation	
- Improving human resources -Correct management of staff allocation for a crisis situations -Enhancing physical space and equipment in trauma emergency ward	Efficient management of human resources and supplies	Rectifying managerial issues of emergency system
- Providing psychological counselling programs for emergency staff -Using the staff's viewpoints in decision-making -Contingent rewards - Pay and financial support -Benefiting from the nurses' leader	Nursing manager support	
- Preparation of protocols to Increase the speed of team work services - Establishing relationships of cooperation - Audit/feedback by the physician in charge - Managing trauma team conflicts	Closed-loop communication	Adopting teamwork approach
-- Determining the exact description of the trauma team roles and responsibilities - Navigating the new role and duties	Role clarity	

Table-2. Mean scores of prioritizing optimization scores regarding caring for patients with trauma emergency

Row	Strategies	Mean±SD scores of the participants (n=14)
1	Rectifying managerial issues of emergency system	6.95±.75
2	Specialized trauma care	6.56±1.3
3	Enhancing trauma emergency response preparedness	6.01±.78
4	Adopting teamwork approach	5.41±.72

Specialized trauma care

The participants also emphasized the importance of developing specialized care and stated that this goal would be reached by better optimizing the care process by paying attention to training and continuous education of the staff and re-evaluation of clinical care protocols. They stated that optimizing care without paying attention to the level of awareness and education can create various challenges during the care process.

Continuous training of nurses courses

The participants believed that the continuous training courses as a subcategory is one of the strategies to increase the knowledge of physicians and nurses in the care process. Based on the participants' statements, until they are not aware of the correct care process, they cannot understand or apply them. A participant with seven years of experience said, "When we have patients, many of our colleagues don't know what to do. If they held some specialized courses for us and physicians, this wouldn't happen. They only hold courses that are mostly not related to our ward, and this issue is not fixed with one course, these courses should be repeated every year because new information is released every day that we should know about. After that, it's our fault if we do not learn from such courses."

Specialized clinical protocols

Participants said that in addition to the need to hold training courses and increase awareness, the availability of dedicated guidelines is also important. A physician with more than seven years of experience said: "You see everything in the ward except a good guideline. Well, most of the time I want to know what to do with the next patient, but I don't even have a checklist or educational booklet. The guidelines available are all copied from different websites that are either too old or incomplete. Comprehensive and standard guidelines should be prepared so that we can use them whenever needed."

Enhancing trauma emergency response preparedness

Trauma emergency preparedness refers to the readiness of a hospital to react constructively to threats from the admission process for severely traumatized patients in a way that minimizes the negative consequences of trauma for the health and safety of the patients. They stated that developing a reporting process and activating the trauma team of the hospital, can help allocate tasks before the patient's arrival.

Development of an initial trauma care process

Enhancing the initial trauma care process such as the systematic approach to manage and maximize outcomes, reduce the risk of undiscovered injuries and rapid diagnosis of multiple concurrent complex conditions was reported by the participants as another strategy. A female nurse with more than 10 years of experience said: "I think an ideal team should be available at all hours and the active involvement of doctors, along with nurses is very important. A leader should be identified who allocates the tasks to members before the patient's arrival. It's necessary to activate our hotline for patient admission. The team should strive towards completing both primary and secondary surveys in half an hour".

Promoting Trauma Emergency documentation

Enhancing documentation methods by the participants showed that documenting certain processes during care, including nursing reports, delivery method, patient care measures, and measuring indices are not currently being documented well. Therefore, it is necessary to legally document evidence of the care process. Such evidence included the method of reporting and preparing the form for admitting patients because defects related to these documents would lead to inadequate follow-up of the patient's condition and some legal problems. One female participant with six years of work experience said "In this ward, patients are not admitted and changes are not based on a specific guideline. In many cases, I want to know what the nurse in the previous shift had done for the patients, but even the shift-to-shift handoff forms don't have the required items

that should be recorded. I said many times that these forms should be corrected because, during accreditation rounds, we are sometimes blamed because of insufficient evidence".

Adopting a team work approach

Adopting a teamwork approach is one of the strategies for explaining and prioritizing emergency care strategies for emergency patients. They believed that the culture of teamwork will not increase until the appropriate communication between colleagues is strengthened and the role of individuals is clearly defined.

Closed-loop communication

Concerning the sub-category of closed-loop communication, many participants believed that improvements in the care process depend on improvements in communication and multidimensional collaboration between all the medical team members. Teamwork is highly important in emergency environments and the participants stated that improvements in work relationships facilitate better implementation of treatment and care processes. A physician with six years of experience stated, "when doctors do not respect nurses who are in the front line of care and work alongside them, cooperation between them is weakened. I want to say is that we must interact with each other in one way or another so that we could work with ease. If this connection improves in a team, all health care providers as well as the patients will benefit."

Role clarity

Concerning role clarity, the participants stated that this item would reduce the nurses' workload and directly affect care quality. This could provide more opportunity for the nurse to provide care and identify emergency conditions and thus decrease work tension. Role clarity can affect group work performance. A nurse with seven years of experience said, "We have to enhance group work in this ward to decrease our workload. Why should I have to do the duties of physician or hospital security guard as a nurse? All these affect the quality of patient care. If each person's role is clarified, we have more time for patients and this way group work quality is increased".

Discussion

The current study declared that trauma nursing care in the emergency setting needs a strategy to manage and handle the factors that surround nursing care. The participants

described several actions for severely traumatized patients and detailed the main strategies according to differences between the trauma patients and other patients in the emergency settings. Subsequently, the nurses described the actions that can enable them to work with these patients and to manage them effectively. In this study, nursing intensive care of trauma, increasing preparedness for trauma emergency response, improving emergency system management, and organizing the performance of trauma team, were identified as the main strategies by nurses, which resulted a sense of urgency about their care. These mentioned items were associated with saving patients' lives. Since the development of care for emergency traumatic patients have a profound effect on its outcomes, and the adoption of strategies in line with environmental conditions seems to be essential in improving trauma outcomes.³³ The results of this study can be effective for improving the quality of care for such patients as well as the defined factors are effective in improving care based on the participants' experiences and perceptions.

The studied nurses in the present study described the "rectifying managerial issues" as the first strategy. According to the nature of the emergency care, working in this unit is unpredictable and requires a high level of concentration. In this regard, the nurses described efficient management of human resources and supplies as an effective way to improve the managerial factor to deal with the traumatic emergencies. It was reported that sometimes they are not sure about the patient's progress or complications, and hence they cannot control what is going to happen to the patients. A previous study showed that lack of infrastructure such as manpower, care space, and equipment are main factors affecting the quality of care for patients with trauma emergencies. In this study, it was emphasized that careful planning and improvement of existing procedures by policymakers to solve this challenge can improve the care environment.³⁴ Our findings are consistent with the results of Uthkarsh et al. study.³⁵ Most nurses expressed that nursing manager support can increase the level of management as a main factor and leads to positive outcomes of the emergency management system. The participants reported that financial support and rewards and having a nurse as a leader are effective to improve their work performance. By paying attention to this strategy they can overcome the nursing care problems in the trauma emergency unit and facilitate the implementation of

care improvement programs. There is evidence suggesting that the commitment and responsibility of managers in hospitals have many implications for the quality and safety of employee processes and practices.³⁶ Previous studies have also shown that various strategies such as financial incentives were more effective compared to other factors to make staff feel more supported.^{37,38} Lee et al., confirmed that managers should identify such factors to maximize organizational performance.³⁹

The second strategy was to develop a “specialized trauma nursing care”. Providing specialized care was identified as another important factor that helps nurses working with trauma patients. The findings of this study revealed their view that working with trauma patients requires an advanced level of appropriate knowledge and skill to meet the demands of the care process. They primarily emphasized their role in working with these patients and the frequency of exposure over time, to develop their knowledge and skills for better managing these patients. In this regard, continuous training of nurses is a way to specialize patient care measures, and since specialized care training does not necessarily lead to their use in practice, its implementation is a necessity for staff to optimize patient care measures. Continuous training of nurses prevents unplanned and routine care. In a related study, Haley et al., mentioned that caring for trauma patients is associated with obtaining professional and specialized knowledge so that people could understand the mechanisms of damage and subsequent pathophysiological reactions. Therefore, nursing education is very important for providing optimum care.⁴⁰ Researchers have emphasized correct planning for implementing continuous nursing education to increase their performance.⁴¹ Moreover, according to the statements of the participants, the existence of care protocols and guidelines facilitate the process of referring to data and provide scientific evidence and enhance the culture of evidence-based learning, which is the most important goal in clinical care. They identified the need for appropriate protocols to handle these patients instead of gaining experience over several years. Previous studies have indicated the necessity of such protocols as an important part of the treatment process and stated that this can provide a systematic view of the whole process for policymakers.⁴²⁻⁴⁴

The nurses discussed “enhancing trauma emergency response preparedness” here, as well as the other strategies to optimize the trauma care explained earlier in the findings,

which could be similar to what nurses do before the arrival of severely traumatized patients to the emergency unit. The most important point of this study is the attention to individual care for all trauma patients. In the present study, an initial trauma care process was recognized as one of the subcategories that can enhance the preparedness for trauma response. Any patient may have a sudden change in health status at the first hour, which is the most crucial period in a trauma emergency. Since the care process is unique to each trauma patient, then trauma patients may experience death or secondary injuries if the nurses are not prepared enough to care for them. This finding is similar to the results of Abhilash et al.⁴⁵

Promoting trauma emergency documentation emerged as one of the most effective methods for caring a trauma patient. The most prevalent enhancement of documentation issues reported were related to handover and shift-to-shift handoff. This action was a major practice, which is necessary for staff members to inform, prepare and respond to the patient’s situation and follow-up patient care. The participants expressed that only a complete and standard registration system could show and demonstrate all the provided care services. Careful and timely recording of care is essential for judging the quality of treatment and care have been provided for the patient, and hence can facilitate the preparedness of the system to respond to the patient’s condition. The participants expressed that inadequate shift report and other handoff documentation could adversely affect the care quality. Nurses who had recorded an adequate data from the patients, can be more prepared to continue the care process. Other studies emphasized that improvement of the registration and documentation systems (such as interventions and outcomes) in trauma patients can increase the quality of care.^{46,47} Moreover, the adequacy of data registration can affect the method of implementing laws, regulations and resource allocation in the trauma patients.⁴⁸ Additionally, the indices related to nursing services (such as the nurse/patient ratio) should be measured, controlled and documented using a standard method. Moreover, paying attention to this issue reduces the nurses’ workload and saves their time for caring for patients.

Adopting teamwork approach was the last strategy identified from the focus group discussions. We found that the method of leadership and group work had a considerable effect on the care process. Communication was identified as

a major factor in the success or failure of the performance of the trauma emergency teams. The vital importance of communication in teamwork is highlighted repeatedly around the subcategories of closed-loop communication and role clarity. They emphasized that communication improvement can enhance treatment and care outcomes in patients. In this regard, the medical team communicates with each other and affects the teamwork process and group performance. The participants reported that they were not able to manage conflict between nurses and physicians. Therefore, auditing and feedback on the quality of communication by a responsible physician, as the leader of all physicians, can manage the conflict between them, and hence avoid tension in the trauma team. Effective communication is critical in the emergency departments due to the key role of communication improvement in attaining common treatment goals such as caring under complex situations. This finding is consistent with the results of the previous studies.⁴⁹ Improvements in teamwork can ensure patient safety and better outcomes by optimizing the golden time for care for trauma patients.^{50,51} Researchers found that suitable professional interaction can increase patient satisfaction and is an important index in clinical settings.⁵² Teamwork requires effective communication between all members of the treatment group, to the extent that disruption of these relationships can have negative consequences for the patients.⁵³

The other contributing factor playing a role in this strategy is role clarity. Based on the results of the present study, clarifying the employees' duties and responsibilities leads to better working conditions, reduced teamwork interferences and more control of employees in the care environment. Laukanen et al., found that the correct division and clarification of employee duties helped adjust the workload and proper management of human resources and could eliminate the deficiencies of staff performance.⁵⁴ The main limitations in this article was participants' heavy workloads, time constraints, and a lack of in-depth understanding and skills related to this methodology. Another limitation of this study was also related to sampling strategy, which limited the generalizability of the findings.

Conclusions

This study offered nurses an opportunity to tell their own stories about emergency settings and trauma patients to

present their perspectives regarding the optimization of patient care by sharing their experiences with the researcher. They subsequently described the rectifying managerial issues of the emergency system, specialized trauma nursing care, enhancing trauma emergency response preparedness and adopting a teamwork approach to optimize care. The findings of this study highlighted the management method of nurses' performance in the workplace. Although these strategies should be considered simultaneously, it is very important to prioritize them. Attending to these strategies is essential and healthcare authorities such as nurse managers should pay special attention to it and nurses should provide more effective care in the trauma emergency department based on appropriate and applicable strategies. These findings could be considered by nurses, educators and managers as a basis for further studies in the field to establish their transferability to a larger population in other trauma emergency settings, as well as in different clinical settings where nurses work with trauma patients. The strength of the study was in-depth participant investigation and capturing the hidden meaning of the phenomenon. It is recommended to conduct further studies regarding the method of establishing and implementing the strategies for providing care for patients with trauma emergencies.

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Authors' Contribution

Study concept, design and supervision: Jamshidi, Norouzi Tabrizi and Khankeh; acquisition of data: Jamshidi; analysis and interpretation of data: Jamshidi, Norouzi Tabrizi and Khankeh, Fallahi Khoshknab, Dalvandi, Vizeshfah; drafting of the manuscript; Jamshidi, critical revision of the manuscript for important intellectual content, statistical analysis, and administrative, technical, and material support: Norouzi Tabrizi and Khankeh.

Conflict of Interests

Non-declared.

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