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RESEARCH ARTICLE

FAMILY NEEDS OF TRAUMA PATIENTS IN EMERGENCY DEPARTMENTS: A COMPARATIVE STUDY OF FAMILIES' AND NURSES' PERSPECTIVES

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ABSTRACT

OBJECTIVE:

This study aimed to compare the needs of the families of trauma patients admitted to the emergency departments (EDs) from the perspective of families and nurses.

DESIGN:

This study is a descriptive-analytical, cross-sectional study.

SETTING:

The study was conducted on trauma patients with non-acute injury with triage level 3, 4 and 5 in the EDs of seven Medical and Educational hospitals in Mazandaran (North of Iran).

MAIN OUTCOME MEASURES:

The data collection instruments included a demographic information questionnaire and the Critical Care Family Needs Inventory Emergency Department (CCFNIED). Data analysis was performed using descriptive and inferential statistics (chi-square, independent t-test, and Mann-Whitney U test).

RESULTS:

The average age is 37.90 ± 11.76 for the family members of trauma patients and 33.20 ± 6.27 for the nurses. The needs related to the communication and participation dimensions, such as talking to the physician (Mean= 3.42) and knowing about the expertise of staff caring for your relative (Mean= 3.41) received the highest scores from the perspective of family members. In addition, the needs related to the communication and comfort dimensions such as talking to the physician (Mean= 3.41), to be treated as an individual (Mean= 3.40) received the highest score from the perspective of the nurses. The mean scores of the family members' needs from the perspectives of family members and nurses do not differ significantly, although the scores of the needs of family members from the perspective of family members are higher (p = 0.336).

CONCLUSIONS:
Considering that the needs related to the communication dimension are considered important from the perspective of both families and nurses, therefore, it is suggested to do the necessary planning in this regard.

KEYWORDS
needs assessment, family, trauma, emergency service, hospital, perception, wounds and injuries

BACKGROUND

The emergency department (ED) is a challenging and stressful environment for patients, their families, and healthcare staff, causing anxiety for patients and their families [1]. The unfamiliarity of the environment and conditions make it more stressful for family members [2]. Many emergency department patients have experienced traumatic events, which are a leading cause of disability and mortality in both modern and developing societies [3].

Patient care, especially in the emergency setting, is not only about meeting the needs of the patient, but also the needs of their family [4]. Because patients need more support from their families to overcome the health turmoil, the likelihood of emotional problems for family's increases following the physical and mental crisis of hospitalized patients [5]. Some believe that families of hospitalized patients may suffer more anxiety than the patients, however physicians and nurses often focus on treatment and have limited time to address the family members and their needs [6, 7]. Identifying the needs of patients' families should be part of nursing care, which is recommended to be addressed in hospital emergency departments [8].

Meeting the needs of the patient's family in emergency departments can result in reduced stress, increased family performance in patient care, improved quality of healthcare, and facilitated patient recovery [9]. It also increases the trust of patients and their families in the ED staff and creates a healthy environment so that staff can focus on the patient. Moreover, it prevents harmful and violent behaviors of patients and their families [10].

One review study of the needs of families of adult trauma ICU patients reported needs such as information, understanding, hope, support, participation, and protection. However, this review study was limited by the lack of research focused on families of trauma patients and its reliance on subgroups of traumatic brain injury and burn injuries, suggesting further investigation of the needs of other trauma patients' families' especially in ED in future studies [11].

Additionally, in one study, the perception of family needs was different from the perspectives of emergency department staff and family members. Family members placed more importance on the need for effective communication than emergency nurses [12]. However, in another study, which examined the perception of family needs from the perspectives of emergency department staff and family members, it was observed that nurses did not consider family needs [13], which indicates that different studies have reached different results regarding the needs of families of hospitalized patients.

In general, a review of available databases showed that scant studies have been conducted on the needs of families of trauma patients admitted to the ED, especially in Iran. Most have focused on the needs of families of patients hospitalized in ICUs or not considered the type of injury or illness. It should be noted that the ED is inherently different from other departments and the needs of the families of trauma patients are different from those of other patients. Besides, the focus of the conducted studies has been more on the perspective of the families, and the nurse's perspectives still need to be fully addressed. Nurses play an important role in addressing these needs, but their perceptions of the priorities and importance of these needs may differ from those of families. Comparing perspectives and identifying agreement or disagreement between families and nurses can help nurses more consciously identify and prioritize families' real needs in their care plans. Additionally, sociocultural and geographical contexts that contribute to the diversity of needs among patients' families, can be important factors. Therefore, evidence from different cultures around the world is crucial [14].

Therefore, this study aimed to assess the needs of Iranian families of trauma patients admitted to the ED of hospitals from the perspective of families and nurses.

METHODS

STUDY DESIGN AND SETTINGS

This descriptive-analytical cross-sectional study was conducted on 441 Iranian participants (222 family members of trauma patients referred to the EDs & 219 nurses working in the EDs) from July 2022 to July 2023. The study was conducted in the EDs of seven Medical and Educational hospitals in Mazandaran (North of Iran).

INCLUSION CRITERIA

The inclusion criteria for the families of trauma patients were age ≥18, being literate, being able to speak Persian, having no physical or mental disability, two hours after the patient's admission to the ward, and accompanying trauma patients with non-acute injury with triage level 3, 4, 5 (oriented patient, aware of time and place with no need for care in the ICU). The inclusion criteria for nurses included having a bachelor's degree or higher, at least 6 months of work experience in the ED [8], and the experience of caring for trauma patients. Incomplete completion of questionnaires and withdrawal or unwillingness to participate at any stage of the study were among the exclusion criteria.

DATA COLLECTION

The instruments used in this study included a demographic information questionnaire and the Critical Care Family Needs Inventory Emergency Department (CCFNIED).

The demographic information form for family members included age, gender, marital status, education level, occupation, financial ability, relationship with the patient, residence, and living with the patient, and demographic information for nurses were their age, gender, marital status, education level, and work experience.

The CCFNIED is a questionnaire for assessing the needs of families of patients hospitalized in the ED. It consists of 40 items and four subscales: support, comfort, communication, and participation. Items are rated on a four-point Likert scale from 1 (not important) to 4 (very important). The score for each item ranges from 1 to 4. The support subscale, which has six items, addresses the needs of families for support in the ED. The score for this subscale ranges from 6 to 24. The comfort subscale with 11 items reflects the emotional, physical, and personal comfort needs of families in the ED. The score for this dimension ranges from 11 to 44. The communication subscale with 10 items focuses on mutual understanding and information exchange between family members and healthcare providers. The score for this dimension ranges from 10 to 40. Finally, the participation subscale with 13 items addresses the family members' desire to participate in the care and companionship of their patient. The score for this dimension ranges from 13 to 52. The total score for the questionnaire ranges from 40 to 160 [2, 15]. Molter (1979) first designed the Critical Care Family Needs Assessment (CCFNI) questionnaire [16]. Then, Redley (2004) modified and adapted this instrument to EDs, and developed the CCFNIED [17]. This questionnaire has an acceptable reliability and validity [5, 17]. In a study by Adineh Menbar et al. (2019) [8] in Iran, the CCFNIED was assessed and translated. Also, validity and reliability of the Persian version of the CCFNIED was confirmed satisfactorily. The Cronbach's alpha coefficient was found to be 0.86 [8].

SAMPLE SIZE & SAMPLING

To determine the sample size, data from the study by Demirtas et al. (2020) were utilized [1]. Based on the proportion of trauma patients' needs (p = 0.477), 95% confidence level (a = 0.05, Z = 1.96), and margin of error equal to 10% of p (d = 0.0477), the required sample size (441 participants, including family members of trauma patients and nurses working in the emergency department) was calculated using the following formula.

$$n = \frac{Z^2 \cdot p \cdot (1-p)}{d^2}$$

The number of nurses working in the EDs of the investigated hospitals was 260, of which 219 nurses were eligible to include the study; therefore, 219 nurses working in the EDs participated in this study. Also, the number of patients' families available was 240, of which 2 did not meet the inclusion criteria and 16 did not want to cooperate; therefore, finally 222 patients' families participated in this study.

The sampling method in this study was convenience sampling for families of trauma patients and census sampling for emergency department nurses if they met the inclusion criteria. In this way, the researcher was constantly present in the emergency departments and personally distributed and collected the questionnaires. The questionnaires were often given to the patients 2-3 hours after admission, after the patient's condition had stabilized and the family was relatively calm. This timing (2-3 hours after admission) was chosen to improve participants' ability to understand the study information, provide informed responses, and complete the questionnaire with greater accuracy and reliability. It also helped minimize the influence of the initial shock and anxiety that often occur immediately after trauma admission. The questionnaires were completed in private, without the presence of nurses. The nurses' questionnaires were also given to them during the same period of time as the researcher was present in the emergency department.

STATISTICAL ANALYSIS

After collecting the completed questionnaires, the data were fed into SPSS version 22. The findings were reported using mean ± standard deviation and frequency (percentage). Data analysis was performed using descriptive and inferential statistics (chi-square, independent t-test, and Mann-Whitney U test). The results for the needs of trauma patients were separately reported qualitatively (prevalence with 95% confidence intervals) and quantitatively (based on the questionnaire as mean with 95% confidence intervals). Since there was no normal distribution in the age variable, the nonparametric Mann-Whitney U test was used to compare the mean age between the two groups of family members and nurses. Additionally, the independent t-test was used to assess the statistical significance of the results in the age difference between the family members and nurses. Finally, the association of the reported needs of family members of trauma patients with the demographic variables of gender, age, marital status, education level, occupation, financial ability, residence, and employment were examined. The subgroup analysis was performed based on trauma patients referred to the hospitals. A p-value < 0.05 was defined as statistically significant.

ETHICAL CONSIDERATIONS

The Ethics Committee of Mazandaran University of Medical Sciences approved the study with the ethics code IR.MAZUMS.REC.1401.202. Participation was voluntary, with written informed consent obtained from all participants by main researcher (L.A), and it was explained that the information would be kept confidential. Participants were informed that they could skip any question or withdraw from the study at any time without consequence. Surveys were self-administered, with no time constraints, and support was available if needed. The families of the trauma patients were assured that withdrawal from the study would not adversely affect the treatment procedure or care. The nurses were also assured that not participating in the study would not affect their evaluation or work conditions.

RESULTS

The present study involved 222 family members of trauma patients referred to the EDs and 219 nurses working in the EDs of seven hospitals. The mean and standard deviation of the age are 37.90 ± 11.76 for the family members of trauma patients and 33.20 ± 6.27 for the nurses. Meanwhile, most of the participants from the family members were male (120 men), while there were 154 female nurses. In most cases (81.18%), the patient's sister was present as an accompaniment. Details are provided in Table 1.

TABLE 1. DEMOGRAPHIC INFORMATION OF THE FAMILIES OF TRAUMA PATIENTS AND NURSES WORKING IN THE EMERGENCY DEPARTMENTS OF TEACHING AND THERAPEUTIC HOSPITALS

Variables	Subgroups	Families of patients		Nurses		p value
Gender No. (%)	Males	120	54.05	65	29.36	<0.001
	Females	102	49.95	154	70.64	<0.001
Age (Mean±SD)		11.76±37.90		6.20±33.27		<0.001
Marital status No. (%)		151	68.02	139	63.47	0.27
Experience(Mean ±SD)	In the emergency department (month)			67.57±52.07		
Occupation No. (%)	Employee	38.81				
Relationship between the patient and the companion	Father	39	17.89			
	Mother	26	11.93			
	Sister	41	18.81			
	Brother	35	16.06			
	Child	29	13.30			
	Spouse	24	11.01			
Financial ability No. (%)	Moderate	58.37				
Residence	Urban	163	73.42			
	Rural	59	26.58			
Living in the same house as the patient (%)	Yes	142	64.55			

The results showed that the following needs received the highest scores from the perspective of family members, with the majority belonging to the communication dimension: to talk to the physician (communication dimension), to know about the expertise of staff caring for your relative (participation dimension), to be assured that the best care possible has been given to your relative (communication dimension), to feel hospital staff care about your relative (communication dimension), and to have questions answered honestly (communication dimension). In addition, the following needs received the highest scores from the perspective of nurses, with the majority belonging to the communication dimension: to talk to the physician (communication dimension), to be treated as an individual (comfort dimension), to talk to a nurse (participation dimension), to have questions answered honestly (communication dimension), and to have explanations given in understandable terms (communication dimension). It was found that the needs of the communication dimension were considered more important by both groups of family members and nurses (Table 2).

TABLE 2. THE MEAN SCORE OF NEEDS OF FAMILIES OF TRAUMA PATIENTS IN THE EMERGENCY DEPARTMENTS OF TEACHING AND THERAPEUTIC HOSPITALS FROM FAMILIES' AND NURSES' PERSPECTIVES

Needs	Item No.	Families of patients' perspectives	Mean	Item No.	Nurses" perspectives	Mean
Highest score	11	To talk to a doctor	3.42	11	To talk to a doctor	3.41
	13	To know about the expertise of staff caring for your relative	3.41	29	To be treated as an individual	3.40
	17	To be assured that the best care possible has been given to your relative	3.40	12	To talk to a nurse	3.38
	30	To feel hospital staff care about your relative	3.38	15	To have questions answered honestly	3.36

	15	To have questions answered honestly	3.38	16	To be told about transfer plans while they are being made	3.32
Lowest score	32	To be encouraged to express emotions	2.91	36	To be told about religious services	2.86
	33	To be reassured as to what normal emotional responses should be	2.90	4	To have friends and relatives with you while in the emergency department	2.77
	34	To share emotions with staff	2.87	18	To stay out of the way during your relative's care	2.76
	37	To have food and refreshments nearby	2.83	23	To be with your relative at any time	2.73
	36	To be told about religious services	2.76	21	To have a staff member with you while visiting your relative	2.57

An independent t-test was used to compare the mean scores of the family members' needs from the perspectives of family members and nurses. Table 3 shows that the mean scores of the family members' needs from the perspectives of family members and nurses do not differ significantly, although the scores of the needs of family members from the perspective of family members are higher (p = 0.33). Moreover, comparing the mean scores of the needs of patients' families in the emergency departments of teaching and medical hospitals from the perspectives of families and nurses after adjusting for age and gender variables showed that there was no significant difference (Tables 4 and 5).

TABLE 3. COMPARISON OF THE MEAN SCORES OF THE NEEDS OF FAMILIES OF PATIENTS IN THE EMERGENCY DEPARTMENTS OF TEACHING AND THERAPEUTIC HOSPITALS FROM THE PERSPECTIVES OF FAMILIES AND NURSES

Variable	Patients' families' perspective	Nurses' perspectives	p value
	Mean ± SD, 95% Confidence Intervals	Mean ± SD, 95% Confidence Intervals	0.33
The total score of the family needs	126.44±1.44, (CI: 123.59-129.29)	124.64±1.21, (CI: 122.25-127.03)	

TABLE 4. COMPARISON OF THE MEAN SCORES OF THE NEEDS OF FAMILIES OF PATIENTS IN THE EMERGENCY DEPARTMENTS OF TEACHING AND THERAPEUTIC HOSPITALS FROM THE PERSPECTIVES OF FAMILIES AND NURSES AFTER ADJUSTING THE AGE VARIABLE

Variable	Patients' families' perspective	Nurses' perspectives	p value
	Mean ± SD, 95% Confidence Intervals	Mean ± SD, 95% Confidence Intervals	0.69
Age	125.79±1.39, (CI: 123.05-128.52)	125.02±1.28, (CI: 122.48-127.55)	

TABLE 5. COMPARISON OF THE MEAN SCORES OF THE NEEDS OF FAMILIES OF PATIENTS IN THE EMERGENCY DEPARTMENTS OF TEACHING AND THERAPEUTIC HOSPITALS FROM THE PERSPECTIVES OF FAMILIES AND NURSES AFTER ADJUSTING THE GENDER VARIABLE

Variable	Patients' families' perspective	Nurses' perspectives	p value
	Mean ± SD, 95% Confidence Intervals	Mean ± SD, 95% Confidence Intervals	
Male	127.2±57.06, (CI: 123.46-131.67)	122.03±2.44, (CI: 117.13-126.93)	0.089
Female	125.25±2.01, (CI: 121.23-129.27)	125.63±1.39, (CI: 122.88-128.39)	0.87

DISCUSSION

The results of the current study and analyzing the dimensions and needs made it evident that communication, participation, support, and comfort dimensions were prioritized from the perspective of families of trauma patients hospitalized in the ED. Similarly, from the perspective of nurses, communication, comfort, participation, and support dimensions were prioritized.

Specifically, in the present study, the communication dimension (ability to talk to a physician) ranked first from both the nurses' and the families of trauma patients' perspectives, indicating its highest priority. In studies conducted to investigate the needs of patients' families from the perspectives of families and nurses in the EDs, family members reported higher scores for the communication dimension compared to nurses, indicating that they prioritized effective communication more than nurses did [12, 18]. Adineh Menbar et al. (2019) analyzed the needs of hospitalized patients' families in the EDs of hospitals in Zanjan and reported communication, participation, support, and comfort needs, respectively, as the needs of the participants [8]. Similarly, studies conducted in Turkey that examined the needs of patients' families in the EDs concluded that the communication dimension was the most prominent need expressed by families [1, 5]. By the same token, a study conducted by Fortunatti et al. (2018) showed that the greatest need of families was to establish effective communication with staff and to have hope for desirable outcomes [18]. The consistency of results from previous studies with the current study regarding the priority of the communication dimension indicates that nurses' ability to establish effective communication with patients and their families is essential for utilizing the nursing process effectively. Knowledge related to the communication process and effective communication methods is fundamental and necessary in all stages of the nursing process that provides nurses with the necessary leadership and guidance to establish effective communication with patients and their families.

In the present study, comfort needs ranked second from the perspective of nurses and fourth from the perspective of families of trauma patients, indicating their lower priority. In this regard, Büyükçoban et al. (2021) showed that families in Turkey expressed comfort needs as the lowest priority [14]. In a study conducted in Palestine, comfort needs were ranked fourth in priority [19]. This difference in the perspective of nurses and families, as well as the low priority of the comfort dimension for families, could be due to differences in the perception and direct experience of care; nurses in daily contact with patients perceive the need for comfort as an integral part of effective care, while families usually focus more on urgent and vital needs. It could also indicate that families neglect personal issues and show that they prioritize patients and their medical issues [20]. In contrast to the results of the present study and previous studies, Hasandoost et al. (2018) in a study in Qazvin concluded that comfort needs were one of the top three priorities [21]. Possible reasons for this difference include that the present study was conducted in the emergency department, while the study by Hasandoost et al. (2018) was conducted in the intensive care unit. In the emergency department, it is possible that the acute anxiety caused by trauma leads families to prioritize medical needs over personal comfort. However, recognizing and meeting personal daily needs and creating a safe and comfortable environment for rest undoubtedly reduces their anxiety and distress.

In the present study, the support dimension ranked third from the perspective of families and fourth from the perspective of nurses. The results of a study in Egypt also showed that support needs were given the lowest priority [22]. Contrary to the results in the present study, studies by Gundo et al. (2014) [23] and Abbaszadeh et al. (2024) [24] reported that the most important need from the perspective of nurses was the support dimension. Humanitarian feelings vary significantly across cultures and ethnicities, leading to differences in prioritization. Also, various factors such as the time and place of the study, compliance with hospital standards, facilities and equipment, and even different personalities of nurses could be involved in this regard. However, in both family and nurse groups, "talking to a doctor or nurse upon entering the hospital" was a component that was identified as the main need for the support dimension.

In the present study, the participation dimension ranked second from the families' perspective and third from the nurses' perspective. A study conducted in Tabriz revealed that the least expressed needs were related to the participation

dimension [24]. Family members play a significant role in the patient's well-being in the hospital through meaningful interaction with the patient and collaboration with the treatment team. Due to their access to patients and frequent contact with families, nurses can play a crucial supportive role both physically and emotionally [25]. Redley et al. (2019) conducted a study to examine similarities and differences in the fundamental needs of patients' families in the ED in three countries: Australia, South Africa, and Taiwan. The study results indicated that everyday needs in all three countries were related to the participation and communication dimensions [2]. The sensitivity of care in the ED can be mentioned as a justification for the difference between nurses' and patients' families' perspectives. Patients referring to this department often have severe conditions, and even the slightest mistake can have irreparable consequences. Therefore, nurses may have expressed participation needs as less important compared to patients' families.

LIMITATIONS

Among the limitations of this study, the reliance on self-reported data may have caused recall bias or social desirability bias. In addition, since this study was conducted in Iranian hospitals, the findings may not be generalizable to settings with different cultural, organizational, or healthcare system contexts. Also, due to the exclusion of critically ill participants (triage 1–2 and ICU-requiring patients), the findings may not be generalizable to critically ill trauma patients.

CONCLUSION

In conclusion, both groups of families of trauma patients and nurses gave more priority to the communication dimension than other dimensions. Therefore, it is necessary to focus more on improving communication between nurses and the families of patients admitted to the ED in planning nursing care. To translate this finding into practice, the following specific actions are recommended:

- Implement a structured family communication protocol in the emergency department.
- Conduct skills-based training workshops for all emergency department nursing and medical staff, focusing on family communication skills.
- Create a standard family information board in each emergency department waiting area, displaying real-time updates (e.g., “patient in triage”) to reduce uncertainty for families.

Future studies should evaluate the effectiveness of communication-focused interventions in improving family satisfaction and care outcomes.

COMPETING INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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