



# Exploring the Challenges Faced by Nursing Internship Students in Trauma Wards: A Qualitative Content Analysis Study

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## Abstract

**Introduction:** Clinical education in trauma wards presents unique challenges for nursing internship students, which can adversely affect their learning outcomes and professional development. Understanding these challenges is critical to enhancing the quality of nursing education and student preparedness. This study aimed to explain the challenges faced by nursing internship students in trauma departments of hospitals not affiliated with Baqiyatallah University of Medical Sciences.

**Method:** Seventeen participants, including 12 nursing trainees (mean age 22.3 years) and five clinical instructors (mean age 42.4 years), were purposively sampled to achieve maximum diversity. Data were collected through semi-structured interviews conducted in Tehran from September 2024 to December 2024. Conventional content analysis was conducted using the Graneheim and Lundman approach and MAXQDA version 10 software to identify categories and subcategories reflecting the participants' experiences.

**Result:** In this study, 12 nursing students with a mean age of 22.3 and 5 nursing instructors with a mean age of 42.4 were identified. Their experiences of trauma ward challenges were categorized into three main categories and seven subcategories. The main categories included psychological factors with two subcategories: fear and stress of violence and high workload; organizational factors with three subcategories: irregular shuttle service, lack of staff familiarity with event recording objectives, inadequate facilities and equipment; and educational factors with two subcategories: poor collaboration between nursing staff and students, and limited time available.

**Conclusion :** Nursing trainees in trauma units face multifaceted psychological, organizational, and educational challenges that hinder optimal clinical learning. Addressing these challenges requires targeted interventions such as improving clinical staff awareness of students' educational goals, ensuring adequate resources, strengthening supportive relationships between staff and students, and optimizing logistical arrangements. Such measures can improve the clinical learning environment and better prepare students for professional roles in trauma care. Given that the study was conducted in selected trauma units affiliated with non-university hospitals in Tehran, the study's findings cannot be generalized to other healthcare settings.

**Keywords:** Nursing Students, Trauma Ward, Content Analysis.

## Introduction

Trauma is the leading cause of death and disability worldwide, affecting both developed and developing countries alike <sup>1, 2</sup>. The World Health Organization projects a 40% increase in trauma-related deaths by 2030 <sup>3</sup>, with low and middle-income countries experiencing disproportionately high mortality rates <sup>2</sup>. Iran in particular reports alarmingly high fatal traffic accident rates with incidences of 1.34 and 1.32 per

100,000 population in 2013 and 2014, respectively <sup>4</sup>. Effective trauma care delivered by well-prepared healthcare teams can significantly reduce mortality and morbidity <sup>2,5</sup>. Nurses as frontline caregivers play a critical role in improving trauma outcomes; however, evidence suggests that many nursing students and professionals lack adequate knowledge and clinical skills required for optimal trauma care <sup>6</sup>.

Nursing education integrates theoretical learning with practical training to build essential clinical competencies<sup>7</sup>. Developing a strong professional identity is fundamental to delivering safe, high-quality care and is recognized as a core objective within nursing curricula<sup>8,9</sup>. Medical and nursing schools are therefore tasked with ensuring that students can translate theoretical knowledge into clinical practice and develop skills such as critical thinking, self-directed learning, psychomotor ability, time management, confidence, and effective communication<sup>10,11</sup>. Clinical placements provide invaluable opportunities for students to actively engage in patient care actively, fostering a professional perspective that cannot be fully cultivated in classroom settings alone<sup>12-15</sup>. Clinical education by immersing students in real-world healthcare environments enhances interpersonal communication, clarifies roles, promotes teamwork, and hones problem-solving, judgment, and decision-making skills—competencies critical to competent nursing practice<sup>16</sup>. The quality and effectiveness of clinical training directly impact students' readiness to serve as proficient nurses, thereby influencing broader public health outcomes<sup>17,18</sup>. Despite its importance, clinical education faces persistent challenges. Studies have highlighted gaps between theoretical knowledge and clinical performance among nursing students, with many unable to meet expected care standards upon entering clinical practice<sup>19-21</sup>. For example, 88.9% of nursing students report experiencing significant issues in clinical education<sup>22</sup>. Prioritizing improvements in clinical environments and enhancing performance monitoring have been recommended to address these gaps<sup>19</sup>. Identifying and understanding these challenges requires qualitative research methods that explore students' lived experiences and perspectives within clinical settings<sup>16</sup>. Given the pivotal role of trauma care in nursing education and healthcare delivery, and the specific clinical demands of trauma departments, this study aims to explore the challenges encountered by nursing internship students during their trauma rotations in hospitals not affiliated with Baqiyatallah University of Medical Sciences. Understanding these challenges will provide critical insights for improving trauma clinical education and ultimately advancing nursing practice in trauma care.

## Methods

### Study design

This study utilized a traditional qualitative content analysis approach rooted in the naturalistic paradigm, which posits that reality is subjective and shaped by individual experiences and interactions<sup>23</sup>. This method aims to provide an objective, systematic, and replicable

description of the explicit content of a message, as well as to identify concepts and categories within the hidden content of a phenomenon at the theoretical level. It emphasizes delving into participants' experiences to gather contextually rich insights, aligning well with the nature of this research<sup>24,25</sup>. Qualitative content analysis was chosen because it allows for an in-depth exploration of undergraduate nursing students' experiences in clinical settings. This method is particularly suited to studying complex and unknown phenomena, such as facilitators and barriers that influence their dual roles in academia and clinical practice. Without being constrained by pre-existing theoretical frameworks, this method allowed for a systematic analysis of textual data, identifying patterns and themes that reflected participants' perspectives<sup>26</sup>. Given the lack of prior research on this topic, using an inductive approach ensured that findings emerged directly from the data and captured the nuances of participants' experiences in an unbiased manner.

### Participants

Participants included 12 undergraduate nursing students (mean age 22.3 years) in semesters 5–8 and 5 clinical instructors (mean age 42.4 years) with at least three years of clinical experience. Since the majority of students enrolled at Baqiyatallah University of Medical Sciences are male, most participants were male. They were selected through purposive sampling to achieve maximum diversity and reflect a wide range of perspectives on trauma clinical education. Nursing students had completed internships in trauma wards at Shariati, Sina, Hakim, and Bahrami teaching hospitals affiliated with Tehran University of Medical Sciences, including previous internships at Baqiyatallah Hospital. Clinical instructors had experience in trauma settings beyond Baqiyatallah University. Inclusion criteria were nursing students in their fifth to eighth semesters, faculty with relevant clinical experience, and willingness to participate. Those who refused or withdrew were excluded. This purposive sampling strategy aimed to integrate the complementary perspectives of students and faculty to achieve a rich, comprehensive view of the challenges of trauma training. By identifying the distinct roles of each group and combining their insights, a detailed examination of the systemic and experiential factors influencing clinical education was possible. Data analysis was conducted with methodological rigor to identify unique themes from each group alongside shared experiences, providing a comprehensive understanding of trauma clinical education from multiple stakeholders' perspectives.

### Data collection

Data collection took place from September 2024 to December 2024, involving individual, face-to-face, and in-depth semi-structured interviews conducted by the researcher. The interviews were held at a location preferred by the interviewees, primarily the researcher's office in the School of Nursing. The researcher introduced herself, explained the study's objectives, obtained permission to record the conversations for potential data validation, and then asked participants to share their experiences. Participants were guided through the interview process using a specific guide developed for this study. The guide consisted of four open-ended questions [see Table 1] that had been reviewed for content validity by experts prior to administration. To gain deeper insight, additional exploratory questions, such as "What do you mean?" and "Can you provide more examples and explanations?", were posed during the interviews. The average interview duration was  $51.29 \pm 5.13$  minutes and continued until data saturation was reached. Data saturation was achieved when there was enough information to replicate the study, when obtaining additional information was possible, and when further coding became challenging<sup>27</sup>.

### Data analysis

The data was analyzed using a conventional content analysis method based on the method proposed by Elo and Kyngas in the preparation, organization, and reporting stages [Table 2]<sup>27</sup>. Firstly, the recorded interviews were transcribed and read several times to gain a general understanding of the content. After that, semantic units and main codes were identified. Similar initial codes were then summarized and merged into subgroups, and main categories were extracted [Table 3]<sup>28</sup>. MAXQDA version 10 software was used for coding and data management<sup>29</sup>. The creation of codes and categories in MAXQDA is controlled by the user, who can create codes before, during, or after content analysis. The software can use different semantic units in the coding process to link variables to texts, allowing codes to be associated with selected text. During or after coding, the user can check the correspondence between a set of codes and texts. Researchers primarily conducted the qualitative data analysis and coding process based on familiarity with one of the qualitative data Analysis software<sup>30</sup>. Finally, categories and

subcategories were identified from the data. An example of the data analysis is presented in Table 4. To ensure reliability and consistency, two researchers (D.SH and S.H) independently coded the transcribed texts. In cases of disagreement, a third researcher (J.M.) was consulted to reach a final decision. This collaborative process ensured that the coding was systematic, repeatable, and free from individual bias. The final coding framework was developed through team discussions to align with the study objectives and the extracted categories<sup>28</sup>.

### Trustworthiness

To ensure accuracy in this study, the COREQ checklist for reporting qualitative research was utilized<sup>31</sup>. (see Supplementary File 1) Additionally, the criteria proposed by Lincoln and Guba were employed to enhance trustworthiness<sup>32</sup>.

**Credibility:** was established by engaging with participants over an extended period, thoroughly immersing in the data, and conducting member checks. Peer debriefing sessions were utilized during the initial coding phase to validate the data. Codes and interpretations derived from the analysis of certain interviews were reviewed with participants. Observer reviews were also conducted to ensure the accuracy of the coding.

**Transferability:** was enhanced by maximum diversity in sampling, which included students from 5-8 semesters and internships from various departments of Tehran University hospitals.

**Dependability:** was guaranteed through the use of a consistent interviewer and team discussions to coordinate coding.

**Confirmability:** was achieved by using reflective journaling to prevent researchers' biases and assumptions from influencing findings, as well as team agreement on codes, categories, and interpretations.

### Ethical Considerations

This study was approved by the ethics committee of the Baqiyatallah University of Medical Sciences, Tehran, Iran, with the code: IR.BMSU.REC.1403.010. Written and oral consent as a part of the Helsinki Declaration was also obtained from all participants for the recording of their interviews. Participants voluntarily joined the study and were ensured of the confidentiality of their information and the right to withdraw from the study.

Table 1: Semi-structured Interview Questions

Sequence	Question
1	Can you please describe a typical day in your non-university hospital trauma unit?
2	What significant challenges or obstacles have encountered while working in a teaching hospital setting?
3	Can you share examples of memorable experiences or situations you have encountered in your non-university hospital setting?
4	What changes or improvements could be made to enhance education in your non-university hospital setting?

## Results

### Participant's characteristics

A total of 12 nursing students and 5 clinical instructors participated in this study. Table 5 displays the demographic information of the participants. The average age of the nursing students was 22.3 years, while the average clinical age was 42.4 years. Of the total participants, 3 were female, with two being clinical

instructors and one being a nursing student. The majority of participants were male. Three participants were in semester 5, 3 in semester 6, 2 in semester 7, and 4 in semester 8. Data analysis revealed three main categories: "psychological factors," "organizational factors," and "educational factors" (Table 3).

Table 2: Summary of Elo and Kyngas qualitative method

PREPARATION		
Analysis unit selection		Semantic units were identified by transcribing the interviews to text and explicating the content
Finding the logical link between the data and the subject		Reading the text of the interview several times to gain a comprehensive understanding and prolong engagement with the data
ORGANIZING		
Creating an analytical framework		Forgetting care, neglected care, arbitrary elimination of care, compulsory elimination of care, delay in care, interference of care with patients' daily activities, interference with other healthcare providers' activities, failure to complete the care period in the hospital, interruption in care, discontinuing care after patient discharge, providing cares regardless of the nursing process, providing care by unqualified professionals, and providing trial-and-error care were included as the main subcategories in the matrix
Extracting data from the content		The main classes were formed based on conceptual and logical relationships with other classes.
Grouping		Similar codes were merged based on differences and similarities
Classification		The formed groups were classified based on their differences and similarities.
Abstracting		Similar categories were placed in the main categories of the matrix

Reporting Illustrating data collection, data analysis, and each of the main categories in the form of final report, an article in a journal, etc.

Table 3: Categories and Subcategories

Category	Subcategory
Psychological factors	Fear and stress of violence
	Heavy workload
Organizational factors	Irregularity shuttle service
	Lack of staff familiarity with log book purposes
	inadequate facilities and equipment's
Educational factors	Poor collaboration between nursing staff and students
	Limited time availability

Table 4: An example of data analysis

Category	Subcategory
Heavy workload	Extended Working Hours Time Pressure and Task Urgency Insufficient Staffing Levels High patient to nurse Hours

### Psychological factors

Psychological factors were another category that was identified. Failure to address the impact of psychological factors on education can result in irreparable harm, fear, and Stress of violence, and heavy workload were identified as three subcategories.

#### Fear and Stress of violence

The implementation of educational programs in off-campus settings has raised various nursing issues and challenges for students. These include working with patients from diverse cultural backgrounds, handling complaints from companions about medical staff, and dealing with patients who exhibit violent behavior due to the influence of their companions. As a result, students have expressed feelings of fear and apprehension towards potential violence. The new clinical environment led to ineffective communication between students and the medical ward staff. This lack of communication led ward nurses to refuse to accept the students, causing Stress for students when performing medical procedures for

patients. Participants number 8 and 9 articulated this sentiment by stating:

*"In the emergency room, one of my patients, who was an addict, kept yelling and cursing, refusing to listen to anyone. As I attempted to draw blood from her, a nurse*

*warned me that she had a history of violence and had previously attacked someone" (P8)*

*"The nurses did not welcome the students. They simply handed the students syringes filled with drugs and instructed them to inject without providing information on the drug, injection technique, or offering to accompany them. As a result, the students became fearful of administering drugs in the days that followed." (P9)*

#### heavy workload

Although heavy workloads accompanied students when they entered the clinical environment and continued until the end of their internship, they were initially unaware of the nature of these behaviors. However, over time and with increasing awareness and experience, students began to suffer from these issues. In this regard, Participant 1 stated:

*"Every day, two of us in the vital signs control department would monitor forty patients. The staff would sit comfortably in the station, writing their reports. When administering medication, they would give us the prepared medications to inject, as if we were supposed to do everything ourselves."*

### **Organizational factors**

Based on the experiences of nursing students and faculty members participating in the present study, three subcategories of organizational factors were identified: irregular round-trip service, staff unfamiliarity with the objectives of the logbook, and inadequate facilities and equipment. If these problems are not addressed, an appropriate educational environment will not be provided.

#### **Irregular shuttle service**

Another challenge mentioned by participants was irregularity in the shuttle service to and from off-campus internships. Participant number 12 stated:

*"According to the follow-ups and what was communicated to us, the services were supposed to leave at 7:15. However, in reality, this was not the case. One day, the students were picked up at 7:20, and the next day they were picked up at 7:40".*

#### **Lack of staff familiarity with the logbook purposes**

For each department and internship, educational booklets are created with specific behavioral goals tailored to students' semesters. These goals must be achieved under the supervision of professors. One issue participants raised was the staff's lack of awareness of the behavioral goals outlined in the lock books. This lack of awareness hindered students from fully utilizing the clinical environment in alignment with the goals of the lock book. Participant number 15 expressed this concern, stating:

*"The ward staff were unfamiliar with our lock book, so they kept asking us to do things we had not learned about yet, which did not align with the goals of the lock book. As a result, they were unhappy with us and complained about us to our instructors".*

#### **Inadequate facilities and equipment's**

It is essential to enhance facilities and amenities to create a better learning environment for students. During internships at educational settings outside of Baqiyatallah University of Tehran, many students complained about the lack of facilities and amenities in the clinical setting. Participant 5 emphasized the lack of equipment, stating:

*"The hospital did not have enough equipment, including personal protective equipment and supplies for applying*

*sterile dressings, to accommodate the number of patients."*

### **Educational factors**

While learning in a clinical setting involves various issues, this study focused on two specific subgroups: poor staff-student collaboration and Limited time availability. Based on students' and faculty's experiences, these factors were found to impact nursing student learning.

#### **Poor collaboration between nursing staff and students**

The poor collaboration between nursing staff and students reflects the challenges participants face in clinical settings at the University of Tehran. This is primarily due to staff unfamiliarity with the students' educational programs and a lack of trust in the students, both of which are crucial for building students' confidence and competence in the clinical setting. Participant 10 described this type of behavior from healthcare staff as follows:

*"We experienced numerous conflicts in the clinical environment. It is nearly impossible to have a conversation with the nurses and establish effective communication. They are often on edge and tend to raise their voices".*

#### **Limited time availability**

To enhance students' knowledge and training, they must have ample time in the clinical environment to deliver services and observe the outcomes of their actions. Initially, this issue was linked to students arriving late to their internship sites, which are crucial to their learning. Participant number 7 described this challenge as follows:

*"In the mornings, we would get stuck in traffic as we headed towards the hospitals for our service, causing us to arrive late. By the time we familiarized ourselves with the ward and the patients, it would already be noon, forcing us to return. This routine was exhausting and hindered our ability to learn effectively".*

Table 5 Characteristics of the study participants

Participants	Gender	Age (years)	Hospital	Role	Duration of interview (minutes)
P1	Male	21	Shariati	Fifth-year nursing student	58
P2	Male	22	Shariati	eight-year nursing student	50
P3	Male	21	Hakim	Fifth-year nursing student	57
P4	Female	50	Bahrami	Master	45
P5	Male	47	Sina	Master	53
P6	Male	35	Hakim	Master	56
P7	Male	22	Bahrami	eight-year nursing student	50
P8	Male	21	Sina	sixth-year nursing student	49
P9	Female	42	Hakim	Master	52
P10	Male	21	Shariati	Fifth-year nursing student	63
P11	Male	21	Hakim	sixth-year nursing student	46
P12	Male	22	Shariati	Seventh-year nursing student	51
P13	Male	22	Hakim	Seventh-year nursing student	55
P14	Male	22	Shariati	eight-year nursing student	47
P15	Female	22	Hakim	eight-year nursing student	49
P16	Male	38	Shariati	Master	45
P17	Male	22	Bahrami	sixth-year nursing student	46

## Discussion

This study examined the multifaceted challenges faced by nursing trainees in trauma units in non-teaching hospitals. Findings suggest that these trainees experience entered psychological challenges—primarily fear of violence, Stress, and heavy workload—along with organizational and educational barriers. These challenges are uniquely exacerbated by the trauma environment compared to other wards due to the high patient volume, the need to provide services as quickly as possible, and the emotional burden, which can undermine students' clinical learning and professional development. It is important to understand these contextual nuances to design effective strategies that support nursing students and enhance the quality of their clinical education. The identified psychological challenges, particularly fear, are mainly due to the unpredictable and unstable nature of trauma environments. Trainees encounter patients with severe injuries and critical conditions, often accompanied by distressed companions whose behavior can lead to violence. This environment exacerbates trainees' fears, consistent with previous studies that have identified fear as a significant barrier to practical clinical training<sup>23,33</sup>. However, unlike studies conducted in

more controlled or university-based settings, this study highlights how anxiety and Stress are exacerbated in acute trauma settings—where rapid decision-making and immediate responses are the norm. Trainees' fear of harming patients and receiving critical feedback also reflects findings from other settings<sup>34</sup>, but here it is exacerbated by limited supervisory support and scenarios of emotional trauma.

Stress, another prominent theme, is closely linked to the behavior and attitudes of the nursing staff present during clinical procedures. The high-risk trauma environment requires effective coordination and strong teamwork, yet participants reported inadequate psychosocial support and occasional verbal or nonverbal negativity from ward staff, which increased their Stress<sup>35,36</sup>. This suggests a fundamental gap in organizational culture that may differ significantly from that of academic hospitals, where clinical training structures are more established and staff may be more attuned to students' needs. Trainees' perceptions of the heavy workload in this demanding environment are particularly strained, particularly given the organizational constraints typical to non-academic hospitals, such as inadequate staffing and limited educational resources. Previous work has shown that

work and time pressures in clinical settings negatively impact nurses' ability to seek guidance and maintain educational engagement<sup>37,38</sup>. Our findings extend this theme by demonstrating how these factors uniquely combine in trauma units to limit students' learning opportunities, exacerbate burnout, and reduce self-confidence.

The organizational and educational challenges identified—such as denial of decision-making, lack of appropriate facilities, poor collaboration among ward staff, and inadequate clinical supervision—reflect broader systemic issues<sup>39-43</sup>. However, the trauma ward context exacerbates these problems. Physical space constraints and reliance on busy clinical staff, who may lack up-to-date knowledge or motivation to teach, hinder the creation of an effective learning environment<sup>40,41</sup>. Furthermore, the lack of strong institutional support structures found in teaching hospitals means that nursing trainees face a less collaborative educational culture with fewer opportunities for innovation and psychosocial support<sup>44,45</sup>.

Notably, previous studies have often emphasized the challenges of general clinical education, but this study illuminates how the unique pressures of the trauma department exacerbate these problems. The high patient load, emotional intensity, and potential for unpredictable violence create a uniquely stressful and sometimes hostile learning environment. This requires tailored interventions that address not only traditional educational deficiencies but also the specific needs of trauma care settings, including enhanced safety protocols, targeted psychosocial support, and enhanced collaboration between staff and students. As a result, this study provides a deeper understanding of the complex interplay between psychological, organizational, and educational challenges faced by nursing trainees in trauma departments in non-teaching hospitals. Understanding the unique environment is essential to designing effective strategies that reduce fear and stress, optimize workload distribution, and promote a supportive and collaborative learning culture, which is critical to developing competent trauma nursing professionals.

#### Limitations:

One limitation of this qualitative study was the challenge of recruiting enough participants to achieve data saturation. It was also difficult to have the

interviewer present at the researcher's workplace because of the high number of internships. Another limitation was the gender imbalance among participants, with most being male. This gender difference may affect the generalizability of the study's findings, as female participants' experiences and perspectives may differ from those of male participants.

#### Implications for Future Research:

This study reveals key psychological, organizational, and educational challenges faced by nursing interns during trauma rotations in non-teaching hospitals, underscoring the need for targeted research and interventions. It is recommended to conduct a dedicated qualitative study of trauma ward trainers to understand their educational roles and challenges better. Additionally, a quantitative investigation into the effectiveness of stress-reduction interventions for trainees in trauma settings is necessary. Future research should include longitudinal tracking of students' skill development and resilience, alongside experimental evaluations of simulation-based training programs focused on trauma communication and violence de-escalation. Exploring organizational factors, such as staffing and leadership, within non-teaching trauma wards will help foster supportive clinical learning environments. Comparative studies between teaching and non-teaching hospitals, as well as efforts to enhance faculty and preceptor training, are also vital to improving the quality of clinical education and mentorship.

#### Conclusion

This study identified critical psychological, organizational, and educational challenges faced by nursing internship students in trauma departments of non-teaching hospitals. To address these challenges effectively, targeted and practical interventions are required. Specifically, the implementation of structured debriefing sessions following stressful or violent events can help reduce students' anxiety and foster psychological resilience. Additionally, developing joint training programs for ward nurses focused on mentorship and collaboration can improve staff-student interactions and create a more supportive clinical learning environment. Equipping trauma wards with adequate teaching aids and improving clinical supervision are essential to enhance educational quality and student competence. To bridge the theory-practice

gap, nursing education managers should establish clear policies for clinical staff outlining the educational goals and expectations of nursing students, including familiarization with the logbook's purpose. Ensuring reliable transportation and sufficient clinical time allocation will also mitigate organizational barriers that impede effective learning.

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There are no conflicting interests listed by the authors.

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Note cleared.

### Authors' Contributions

Not applicable.

### Ethical Statement

Not applicable.

### Declaration of Generative AI and AI-assisted technologies

During the preparation of this work, the authors used ChatGPT version 4 to improve the clarity of the manuscript. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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