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You won't learn until you want to: medical students' experiences of the educational nature of the clinical environment

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Abstract

Background Acquiring basic skills and achieving professional competence depends on the quality and quantity of training in the clinical environment. Any defects or inadequacies in the education process will impact the quality and quantity of healthcare services, and ultimately, the health of individuals and society. Given the importance of this issue, the aim of this study is to elucidate the experiences of medical students regarding the educational nature of the clinical environment.

Methods This qualitative study employed a conventional content analysis approach and was conducted in 2024. Data were collected through semi-structured interviews with open-ended questions regarding the experience of the "educational nature of the clinical environment." Participants were from various fields of medical sciences and were recruited using purposive sampling. Data saturation was achieved with 22 participants. Interviews were transcribed verbatim and analyzed according to the method described by Graneheim and Lundman. All ethical considerations for human research, including informed consent and confidentiality, were observed.

Results From the data analysis, four main categories and eight subcategories emerged: (a) ultimately, you are alone (passion for learning, student under pressure), (b) Instructor under the student's microscope (instructor as a refuge for students, planning for teaching), (c) Half and incomplete clinical environment (lack of resources, unequal learning opportunities), (d) Communication, key to learning in practice (better communication: more learning, accompanying the patient in learning).

Conclusions The findings of this qualitative study provide significant insights into medical students' experiences in the clinical setting, highlighting the need for a transformative approach to clinical education policies and practices. Students' narratives emphasize the importance of creating an environment that encourages autonomy and active learning and addresses the pressures and challenges they face, such as inadequate resources, high stress levels, and unequal learning opportunities. To improve the educational experience, clinical education policies should prioritize equitable access to learning resources, promote a culture of respect, and collaboration among all healthcare professionals. By addressing these critical areas, clinical education can better prepare future healthcare professionals to navigate the complexities of patient care.

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Background

Medical education is a multifaceted process that integrates both theoretical knowledge and practical skills, with clinical training playing a pivotal role in shaping competent healthcare professionals. Unlike traditional classroom learning, clinical education occurs within a dynamic and complex social context, where students interact with patients, healthcare teams, and the clinical environment itself [1]. The components of the clinical environment can be considered to include: the physical environment, social and psychological dimensions, organizational culture, and learning and training dimensions [2]. Presence at the clinical environment and gaining this immersive experience is crucial for students to apply theoretical concepts in real-world scenarios, develop essential clinical skills, and cultivate professional identities [3].

However, the effectiveness of clinical training is often compromised by various challenges, including inadequate resources [4, 5], insufficient support from clinical staff trainers, and a persistent gap between theoretical knowledge and practical application [5]. Research has consistently highlighted the importance of the clinical environment in influencing students' learning experiences. Factors such as lack of proper organization of the clinical environment for learning different fields [6, 7], Inappropriate organizational culture For example the imposition of care matters on the learners by the staff [7], and the quality of interactions with instructors significantly impact students' perceptions of their training [8].

While some studies have documented the obstacles faced by students such as poor communication with personnel, lack of support from clinical instructors [4, 9] and psychological pressures [10] others have identified positive aspects that enhance learning, including supportive relationships with healthcare professionals [11], individualized and goal-oriented supervision [12] and opportunities for peer collaboration [13]. Learners enjoy participating in patient care [1, 14]. These contrasting experiences underscore the complexity of clinical education and the need for a nuanced understanding of how students navigate their learning environments.

Despite the wealth of existing literature, there remains a notable gap in understanding the specific experiences of medical students regarding the educational nature of their clinical environments. Most studies have focused on isolated factors [3, 7, 10] or have been conducted in special field [1, 2, 4, 5], leaving a need for comprehensive research that captures the holistic experiences of students in diverse clinical settings. This is particularly relevant in institutions like Golestan University of Medical Sciences, where has medical training in low- and middle-income countries.

Conducting this study is essential not only to fill the existing research gap but also to inform educational practices and policies that can enhance the quality of clinical training. By exploring students' perspectives, we aim to identify the key factors that facilitate or hinder their learning in the clinical environment. Understanding these experiences will provide valuable insights for educators and administrators seeking to improve clinical education, ultimately leading to better-prepared healthcare professionals who are equipped to meet the challenges of modern medical practice.

Methods

The present study employs a qualitative approach with conventional content analysis. This method utilizes textual data to generate knowledge, provide new insights, present facts, and offer practical guidance for performance, ensuring reliable and valid results [15]. The study was conducted between February 2023 and May 2024. Golestan University of Medical Sciences comprises seven faculties: Paramedical, New Technologies in Medical Sciences, Health, Dentistry, Nursing and Midwifery, and the International Branch. These faculties offer nearly forty majors at various levels, including associate, bachelor, master, PhD, and medical residency programs [16]. For the interviews, only students from programs that required clinical practicum or internships in hospitals were invited to participate. Consequently, students from programs such as biotechnology, biochemistry, human genetics, and bio-statistics were not included in the interviews. We made efforts to interview students in hospitals who were willing to participate in the study.

The study population consisted of students from various disciplines, including nursing, midwifery, dentistry, medicine, and surgical technology. Participants were selected through purposive sampling, and sampling continued until data saturation was achieved. According to the inclusion criteria, 22 participants were included in the study. The inclusion criteria were: (a) Being a student in one of the medical sciences disciplines that involves clinical practice. (b) Having completed a clinical practicum or internship in a university teaching hospital. (c) Being willing to participate in the study. No specific exclusion criteria were established.

Data were collected through individual interviews (see Supplemental Digital Appendix 1). The interview locations were coordinated with the participants, either in the hospital or at the faculties. A limited number of interviews were conducted over the phone due to the lack of

face-to-face access to the participants. After establishing communication and introducing herself, the researcher explained the purpose and methodology of the project to the participant and obtained verbal consent and cooperation for the interview. The interviews were conducted by a member of the research team who was a PhD candidate. This individual had previously been responsible for conducting interviews in three other qualitative studies and was supervised by two experts in qualitative research throughout all stages. Each interview lasted between 30 and 40 minutes, and the transcription was completed within 24 hours after each interview.

The objective of the interview questions was to gain insights into students' experiences related to the educational aspects of clinical practicums and internships in university teaching hospitals (see Supplemental Digital Appendix 2). This included an exploration of the challenges encountered during the learning process, the opportunities available, and the factors that influence clinical education. To minimize bias, the interviews began with broad, open-ended questions such as: "When we say that the clinical environment is educational, what comes to mind? Please share your experiences. Describe your experience of the educational nature of practicum and internship environment" and, "How did you learn in clinical settings?"

To gain a deeper understanding of the topic, more detailed and follow-up questions were posed based on the participants' responses, ensuring the conversation remained aligned with the research objectives. Probing questions included: "Can you give an example? Why did you feel that way?". If a participant mentioned learning from a good instructor, the follow-up question would be: "What qualities make this instructor good?" If a participant mentioned learning from staff, the question would be: "What role does this staff member play in your learning? Can you explain further about their roles?".

To enhance power dynamics during data collection and ensure authentic and unbiased participant responses, it is important to note that the interviewer consistently aimed to be an active listener throughout the interviews while being a student themselves and having no professional relationship with the university's educational system. Additionally, none of the interviewees had any personal, professional, or academic connections with the authors of the article.

In this study, like other qualitative studies, data collection, analysis, and coding were done simultaneously [17]. The data analysis was based on the content analysis method based on Granheim and Lundman's five steps: (1) Immediate transcription of the entire interview following each session. (2) Reading the entire interview text to gain a general understanding of its content, identify meaning units, and assign primary codes (Meaning units). (3) Abstracting semantic units and primary codes (Abstracting). (4) Classifying similar primary codes into more comprehensive categories (Sorting codes). (5) Identifying the underlying content within the data (Formulating themes) [18].

To ensure the accuracy of the study, Lincoln and Guba's four criteria including credibility, transferability, dependability, and confirmability were used [19]. In this regard, data integration methods including interviews, audio recordings, note-taking, field notes, and follow-up questions were used at the end of each interview. Member checks were used to obtain feedback from participants. Transcripts and extracted themes were returned to several participants, who were asked to express their understanding of the findings and the degree to which they closely aligned with their own experiences. The extracted themes were confirmed. The study was reviewed by experts in qualitative research, and transferability was achieved through the diversity of participants. Examples of participant statements are also included in the text. We made a concerted effort to accurately describe all the steps used in the research.

Results

The participants in this study included 4 bachelor's and 2 master's nursing students, 4 medical students, 4 surgical technologist students, 3 midwifery students, 3 dental students, and 1 laboratory science student. Among the participants, 10 were male and 12 were female. More detailed information is provided in Table 1.

From the analysis of the interviews, 435 meaning units were extracted and grouped into four main categories and eight sub-categories. These items are listed in Table 2.

1-a) The first category extracted from the participants' experiences was "Ultimately, you are alone", which includes the subcategories "Passion for Learning" and "Student Under Pressure." The experience of being in the clinical environment was beautiful for the students; they found it interesting and attractive to see and feel medical subjects up close. Students mentioned that theory serves as an introduction to practical learning; however, they consider theory courses to be dry and are eager to learn in the clinical environment. To such an extent that they study in advance to perform as well as possible in the clinical environment. Participant 20 stated in this regard, "*The patient asked me what this medicine is, but I didn't know. I searched on Google and learned then told him. I try to read in advance so that I can answer the patient's questions so he trusts me*". Another student mentioned, "*I created a telegram channel and told the students in the lower year who are fed up with the dry theory lessons to come to the hospital; for example, I am in the*

Table 1 Characteristics of the participants ($N=22$)

Participant	Gender	Field	Academic Year
P1	Male	Dentistry	5
P 2	Male	surgical technologist	3
P 3	Female	Medicine	5
P 4	Female	Nursing	4
P 5	Female	surgical technologist	4
P 6	Female	midwifery	2
P 7	Female	Nursing	3
P 8	Male	Dentistry	5
P 9	Male	Medicine	7
P 10	Male	surgical technologist	4
P 11	Female	Medicine	5
P 12	Female	Nursing	2 (Master)
P 13	Female	laboratory science	4
P 14	Male	Nursing	3
P 15	Female	Dentistry	6
P 16	Male	Nursing	1 (Master)
P 17	Female	midwifery	2
P 18	Female	midwifery	3
P 19	Female	Medicine	7
P 20	Male	Nursing	4
P 21	Male	Nursing	4
P 22	Male	surgical technologist	3

Table 2 Codes, sub-categories and categories regarding experiences of participants

Category	Sub-category	Code
Ultimately, you are alone	Passion for learning	- Studying before being in the clinical environment. - Being a searcher - Independence in doing work
	Student under pressure	- Compression of duties - High stress tolerance - Destruction of students
Instructor under the student's microscope	Instructor as a refuge for students	- Being a student supporter - Giving confidence to the student
	Planning for teaching	- Being persistent of the instructor - Avoiding theoretical education at the clinical environment - Appropriate evaluation
Half and incomplete clinical environment	Lack of resources	- Lack of sufficient equipment for practice - Lack of comfort facilities
	Unequal learning opportunities	- Discrimination between students - A large number of students
Communication, key to learning in practice	Better communication: more learning	- Learning from the staff - Peer learning
	Accompanying the patient in learning	- Cooperation and helping patients in learning - Attention to the individual differences of patients

lung department and I can help you. We will see a case together. It had a great impact on their learning" (P: 11).

Students believe that their effort, demand, and search are necessary for better learning. The participants stated "you have to go after it to learn" and "learning happens where I want". A midwifery student stated: *"If I see a doctor teaching an intern, or other groups such as nursing instructors are teaching, I go and listen, or if they are doing practical work, I go and observe. In my opinion, internships and clinical practicums also depend on the student's curiosity and willingness to work and learn, because we have students who are afraid and do nothing and do not move forward. The student's courage is very important"* (P: 17).

Students tend to be given independence by the instructors after the initial training until they can manage the patient by themselves. Participant 14 stated, "*I think the instructor should teach the procedure that we are going to do, then take a test from one of the students, then tell me to do it yourself and tell me the result. If they give us independence according to a certain framework, it will make us progress*".

1-b) Students in different disciplines have mentioned experiencing pressure in various ways. One of these is the numerous duties demanded of the student. One student mentioned, "*The work is hard, too much, and there is no time. I am mostly here until the evening, I go home, and I have to come again in the morning. I don't have much time to study*" (P: 3). A surgical technologist student stated, "*Most of the personnel sit and eat breakfast while they tell us to go to the operating room and impose the responsibility there on us*" (P: 2).

The need to do perform routine ward tasks in addition to studying assigned courses imposes significant stress on students. Participant 19 stated, "*In many wards, we can't sleep even for an hour when we are on duty 24 hours. It really puts a lot of mental pressure on a person. A lot of stress reduces the educational load*". Sometimes, students experience stress due to the way their instructors treat them. For example, Participant 2 mentioned, "*We have an instructor who puts so much pressure on us that even the simplest tasks become challenging. If someone makes a mistake, they shout things like, "You made your sterile gloves unsterile! Now hurry up and open the next one! Hurry up!" It really feels like they're just trying to catch us out, and it makes the whole learning environment really stressful*". Sometimes student stress is caused by a lack of previous experience. Participant 18 stated, "*The instructor asked me to do the episiotomy, even though I had no experience at all, not even on a model. I was very stressed*".

The students reported experiencing inappropriate behavior in the clinical environment by instructors and even staff, which was unpleasant and a negative experience for them. Participant 10 says, *"There was an empty*

room, I went to sit in that room, then one of the staff said to go outside and I want to sit. This kind of behavior shows the top-down view and the hierarchical system in the medical field". Another student stated, *"The senior doctor comes and shouts at the resident, then the resident comes and vents his anger on me. When a mistake happens, they say that the student did it, as if they cannot find a wall shorter than the student's wall"* (P: 10).

2-a) Students consider the instructor as their primary source of learning, and perhaps the importance of the teacher's role has led to the instructor's performance being under the student's scrutiny. Instructors provide students with support and self-confidence. Participant 5 mentioned, *"At first, I was afraid to enter the operating room and help. The instructor came and helped us, saying that we should go into the environment and do something so that our fear would disappear"*. Participant 18 stated about the instructor's companionship, which gave them self-confidence, *"Our teacher said that we should not show fear in front of the patient. We used to do whatever we wanted to do with confidence, as if we had years of experience. The instructor stayed at a distance from us. She would observe, and whenever we felt we couldn't handle it or thought we were doing something wrong, she would completely understand and help us".*

2-b) From the interviews with the participants, it is evident that they desire proper planning and discipline in the instructor's activities, which should include a degree of strictness but also be supportive rather than destructive. In this regard, Participant 15 highlighted the importance of the instructor's persistence, stating, *"Some instructors are persistent; it is important to them that the student learns properly. They want the students to be different and literate individuals. However, our faculty is full of instructors who come to complete the mandatory commitment period and do not care about the students at all".*

Students from different disciplines tended to prefer a practical focus in the clinical environment, rather than instructors solely discussing theory. One participant stated, *"Our instructors only teach theory. They say, 'Let's go to that corner,' and then they just start explaining theory. Clinical instructors should engage in practical work"* (P: 20). Similarly, another participant said, *"Instructors should enhance students' clinical performance. Currently, our instructors teach 80% theory, which is boring"* (P: 21).

One of the concerns of the students has been the evaluation method at the end of the course, as they sometimes consider the impact of non-educational factors on the evaluation results to be unfair. A surgical technologist student stated, *"Evaluation is not based on learning at all; it is based on appearance. You can go and sit in a corner of the operating room and do nothing, but in the end, because you were accepted by the system in terms of appearance, you will get a good grade."* Another participant stated, *"The head nurse is from a particular ethnicity and treats students of that particular ethnicity better. A student of that ethnicity could go to rest for an hour, do nothing in the ward, but still receive better grades than mine"* (P: 20).

3-a) Students face problems and deficiencies when they are in the clinical environment, which has led to the emergence of the code "Half and incomplete clinical environment" from their interviews. One of the challenges for students has been the lack of resources; they have not received proper training equipment. Participant 10 stated, *"I'm learning the same way; I don't learn according to the standard. For example, when I see that one sterile pack is used for two people, I learn accordingly, in a half and incomplete manner".* Similarly, dentistry students mentioned, "*The problem with our faculty is the lack of facilities. We don't have many things that we can learn to use. For example, in the endo ward, it is very obvious that everyone should use a rotary and apex locator because, in the future, you will work with these devices in the office, but we don't have these tools at all".*

In the previous sections, we discussed the issue of students working under pressure despite the existence of such conditions. However, we observe that students do not have proper amenities. A nursing student stated, *"In the emergency department of the teaching hospital, we don't have a chair for students to sit! How long should we stand? There is no proper place to sleep. For example, if you sit down for a moment, the head nurse says in a bad tone, 'Get up'".* They also talked about the conditions and problems of the dining hall, dressing room, and pavilions.

3- b) The participants do not consider the learning opportunities to be equal for everyone. The lack of specific educational rules and policies in some cases leads to a feeling of inequality among students. For example, in a maternity ward, there is no clear rule about who should deliver a baby-the gynecologist or the midwifery student. While the educational system requires both students to have delivered a certain number of babies by the end of the course, this creates a kind of competition. They discuss the unequal interaction between different disciplines and students. Participant 18 stated, *"In the labor ward, there is a challenge between midwifery students and residents about who will manage natural childbirth. Most of the time, the residents manage natural childbirth, but this is the right of the midwifery students".* Participant 7 mentioned, *"Once we went to coordinate to find a place to hold a class. The official asked what field of study we were in, and we said nursing. He responded in a bad tone that we don't have a class for you. Whereas if our major was medicine, they would have classes for us".*

On the other hand, accepting a large number of students that exceeds the educational capacity of the system leads to fewer educational opportunities for each

individual. The determination of the number of students for each educational center is done centrally by the Ministry of Health of Iran. Participant 3 stated, *"There are too many of us and we can't fit in the patient's room. In outpatient clinics, because our number is large and the number of patients is fewer, we have to divide the patients among ourselves, so the number of patients we receive is less".* One of the dentistry students mentioned, *"When you enter the class, 20 other students enter with you. How can an instructor teach something to 20 people? Sometimes we can't even see! how much space is there around the unit to see how the tooth extraction technique works?" (P: 15).*

4-a) The participants considered communicating and interacting with others in the clinical environment as necessary for learning, so communication can be considered a key to learning in practice. Students learn and improve by interacting with different people in the clinical environment. Participant 8 mentioned he learned to work with ward equipment from nurses, or Participant 9 stated, *"I learned suturing from operating room staff".* Another student says, *"Everyone is under pressure and the workload is high in the clinical environment, so I try to find people who are fine and connect with them. For example, I contact the nurse to learn how to administer angiocaths. I like to do something to learn"* (P: 11).

Students have also experienced the help and companionship of seniors in facilitating learning. A dentistry student stated, *"This may seem like a small thing, but it was very important to put the suction in the patient's mouth, how to let the patient not feel pain and not be bothered. I learned this from my senior" (P: 1).*

4-b) Through their experiences, the students reported that communication with patients and even their companions was a learning experience for them. This learning was not limited to scientific and technical knowledge but also enhanced their social skills. A nursing student stated, *"One of the patient's family members in the nephrology ward was very knowledgeable and answered every question we asked. We learned colostomy care and many other things about that disease"* (P: 14). Participant 17 mentioned, *"Some patients have good information about their disease; what the test is, what the symptoms are, but there was also a patient who did not know anything".*

Students emphasize that patients are diverse and that it is crucial to communicate with them appropriately. Participant 8 mentioned, *"We learned professional ethics in the clinical environment; how to deal with an elderly patient, a child, an uncooperative patient, or someone with financial problems".* A midwifery student stated, *"Sometimes patients misbehave; many of them have family problems or have experienced miscarriages. This helped us learn how to treat everyone. In fact, we learn the right interaction in the clinical environment"* (P: 18).

Discussion

The objective of this research was to explore the experiences of medical students regarding the educational nature of the clinical environment. Through this process, four main categories and eight sub-categories were identified.

The first category, titled "Ultimately, you are alone," refers to the effort and passion for learning, as well as the experience of students feeling under pressure in the clinical environment. Kavousipour proposed six important factors in the academic motivation of medical students, some of which include "belief in one's own role in victory and failure," "learning ability," and "tendency to be optimistic about oneself" [20]. Similarly, Ghasemi identifies "learning motivation," "interest in learning," and "self-direction" as key factors affecting academic engagement [21]. Our findings on learning motivation are clearly aligned with the factors identified by Kavousipour. In particular, believing in one's own role in winning and losing can help students to be more motivated to study before entering the clinic. This belief can lead to increased self-confidence and willingness to learn. Furthermore, autonomy in doing tasks, which is identified in our findings as a subcategory of learning motivation, is closely related to the concept of self-direction mentioned by Ghasemi. Students who feel more autonomous tend to be more active in their own learning, which can lead to improved performance in clinical settings.

This study revealed that students experienced significant pressure from enduring humiliating and distressing moments, as well as stressful situations. For instance, a study by Rezaei investigating stress and stressors among midwifery students found that 56% of students reported a high level of stress. Humiliating experiences were among the most common dimensions of stressful factors, with instructor's admonition in the presence of clinical personnel being among the highest stressors [22]. Damiano identified five stressful factors among medical students: extensive content, lack of time to study, lack of sleep, excessive pressure on oneself for good grades, and lack of free time [23]. One of the consequences of these pressures is the emergence of psychological disorders. As highlighted in Zeng's study [24], the prevalence of depression, anxiety, and suicidal thoughts among 30,817 medical students was reported as 29%, 21%, and 11%, respectively, which is a significant amount. We suggest that medical schools should implement structured support systems, such as peer mentoring programs, to foster resilience and provide emotional support.

The second main category identified in the current research was "Instructor under the student's microscope". This title highlights the important and effective role of instructors in students' learning. Participants viewed instructors as supporters who instill confidence

in students. This theme is also well-documented in Salminen's study, where the supervisor was identified by medical students as the primary factor determining the significance of their position throughout all stages of education. In the early stages, students seek guidance from their instructors on how to interact with patients and reason through clinical situations. In the final stages of their clinical education, students expected appropriate feedback from their instructors that aligned with their level of progress. They also hoped that their instructors would trust them to care for their patients independently during clinical practice [25].

In the current study, it was noted that participants often observed their instructors or peers performing procedures such as taking a vein from a patient. However, they acknowledged that until they performed the procedure themselves, their understanding remained general. Through hands-on experience, they were able to learn and fully comprehend the process. Similar sentiments were expressed by other participants during the interviews. In Delaram's study, the support provided by instructors to students was identified as a key strength of the clinical environment, which aligns with the findings of the present research [26].

The participants in this study highlighted the necessity of planning and management by instructors. They discussed their positive experiences with persistent instructors who focused on practical work and proper evaluation at the end of the course. Heidarzadeh examined the views of nursing instructors and students regarding the characteristics of an effective clinical instructor. From the perspective of instructors, the intrapersonal characteristics of effective instructors include management skills, educational abilities, moral qualities, and emotional characteristics. Similarly, from the students' perspective, the intrapersonal characteristics of effective instructors include managerial skills, educational abilities, moral qualities, emotional characteristics, external characteristics, and supportive roles. In the category of management skills, students mentioned characteristics such as evaluation, communication, discipline, independence, delegation of authority, coordination, justice, and division of work [27]. In light of these findings, we emphasize the importance of continuous professional development for instructors, the establishment of feedback mechanisms that allow students to provide anonymous input, and the provision of appropriate educational resources for instructors.

The next category is "half and incomplete clinical environment." In this category, we discussed the lack of resources and unequal learning opportunities for students. In this regard, Ahmadi conducted a situational analysis of teaching-learning in clinical education in Iran. In this study, six areas were identified as having serious problems and challenges: curriculum, culture, behavior and attitude, management and leadership, environment, place and time, finance, and technology in Iran's clinical education [28]. Delaram also mentioned the most important weaknesses of clinical education in Iran, in order of priority: the lack of use of educational aids in the clinical environment, lack of welfare facilities, lack of evaluation of the clinical instructor by the student, and inconsistency between theoretical courses and internship [26].

In the present study, students mentioned the unequal learning opportunities in the clinical environment due to factors such as a large number of students, insufficient facilities, and discrimination by instructors and staff. Similarly, in Hajihosseini's study, instructors noted that the number of students admitted is high, while the number of faculty members is low, creating unfavorable conditions [29]. Given the aforementioned points, there is an urgent need to reform educational policies. This includes allocating adequate funding, managing the number of student admissions for academic programs in accordance with existing educational capacities, and implementing regular evaluations of clinical teaching methods to identify and address perceived inequalities.

The final category in the current research is titled "Communication, Key to Learning in Practice." The participants mentioned that in the stressful and complex clinical environment, whenever they were able to establish more appropriate relationships with others, they also received more appropriate learning. They experienced this connection with instructors, staff, other students, patients, and patients' families. In an ethnographic study, Manninen investigated patients' approaches to students' learning in the clinical education ward. The findings of this study showed that when students established a good and mutual relationship, patients actively participated in their learning. If the students were not successful in this, the relationship would be one-sided, and the patients would be passive participants, allowing the students to practice on their bodies but not engaging in conversation with the students [30]. This finding well confirms the experiences of the participants in the present study.

Mirzaei's study revealed that 85.1% of nursing students were weak in communication skills, with the most significant deficiencies in verbal and non-verbal communication and respect for the client [31]. To address these identified weaknesses, we propose integrating comprehensive communication training into the medical curriculum. This could include workshops, role-playing scenarios, and feedback sessions with patients and peers to enhance both verbal and non-verbal communication competencies.

Study limitation

Our study has limitations that may affect the transferability of the findings. The research was conducted exclusively among the students at one of Iran's universities of medical sciences (Golestan), and certain educational levels, such as medical residents and PhD students, were not included. The interviews were conducted only with students, and it is necessary to enrich the findings by also interviewing clinical instructors and healthcare staff. In this study, the interviewer was a PhD nursing candidate who had previously worked for eight years in educational and healthcare settings as a nurse. The interviewer made efforts to avoid bias in data collection through bracketing. Additionally, two faculty members who have published multiple qualitative studies supervised the implementation of the work.

Conclusions

The results of this research highlight the enthusiasm of students in the clinical setting, while also illustrating the pressures they face. The instructor has served as a sanctuary for the students, providing them with support and confidence. Students expected their instructors to guide clinical education with better planning and foresight. Despite the advantages of clinical education environments over theoretical courses, they have suffered from a lack of educational and welfare facilities, leading to unequal learning opportunities. The experiences of the participants in this study demonstrated that better and more continuous communication with instructors, healthcare staff, peers, patients, and patient companions leads to richer learning. The findings of this study can guide instructors, students, and policymakers in improving clinical education. Addressing existing deficiencies and shortcomings requires strong and continuous cooperation between faculties and educational medical centers.

Based on the findings of this study, it is recommended that policymakers in medical education consider the following actions to improve conditions: implementing continuous professional development for clinical instructors, establishing regular feedback systems to collect students' experiences and suggestions, allocating sufficient resources to enhance educational and welfare facilities in clinical environments, encouraging cooperation among instructors, students, and clinical staff to create a supportive educational environment, and conducting regular evaluations of clinical education programs.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12909-025-07211-w.

Supplementary Material 1

Supplementary Material 2

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Author contributions

All the authors contributed to the conception of the study, FM conducted the interviews, and wrote the first draft of the manuscript; EF conceptualization of the study, assisting in conducting interviews and coordinating with participants, transcribing the interview texts, contributing to the writing of the manuscript. FM, AS, LJ contributed to the analysis of the data and participated in the preparation of the first draft; All the authors interpreted the data and revised the manuscript; AS supervised the whole research and, interpreted the results. All the authors have read and approved the final manuscript.

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Data availability

No datasets were generated or analysed during the current study.

Declarations

Ethics approval and consent to participate

All ethical considerations in human research were observed in accordance with the Helsinki Declaration. The purpose of the study was explained to the participants, and informed consent was obtained. Permission for audio recording was also sought. We assured the participants of the confidentiality of their names and their right to withdraw from the study at any time. The ethics committee of Golestan University of Medical Sciences approved this study with code IR.GOUMS.REC.1402.469.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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