

Explaining the Clinical Education Stressors in Nursing Students: A Qualitative Study

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Abstract

Background: Nurses are an important part of the health system, and the effectiveness of their clinical education has a significant impact on community health. The clinical environment is constantly changing, making student education very stressful. Due to the negative effects of stressors on education, the present study was conducted to explain the stressors in the clinical environment.

Methods: In this qualitative study (content analysis), the participants were selected using the purposive sampling method. In-depth semi-structured interviews were conducted with 16 nursing students who had completed at least one semester of internship in Khalkhal University of Medical Sciences until data saturation was achieved. The data were coded, the related codes were classified into categories, and the main themes were extracted.

Results: Four categories were obtained in this study: personal problems, the interaction between students and patients, patients' families, instructors, and ward staff, executive planning, and clinical education environment. The most important source of stress was personal problems, including a lack of awareness and fear of following some clinical guidelines. The lower-semester students were reported to have more stress than last-semester students.

Conclusion: Due to the many clinical stressors, the related authorities should be required to promote students' professional development by identifying the clinical environment stressors and providing appropriate solutions to reduce and control them. In this regard, considering the role of instructors in reducing stress and facilitating student learning, providing educational programs to train instructors in this area can be one of the main steps to reduce student stress.

Keywords: Stress, Clinical education, Nursing, Qualitative research

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Introduction

Nurses are an important part of the health system (1). The general goal of nursing students is to become professional nurses (2). Fundamental nursing education has a significant impact on community health (1).

Nursing education includes both theoretical and practical processes. Clinical education is an important part of nursing education and accounts for about half of the training time of the nursing school (3). Effective clinical education is one of the strategies that can provide nurses with systematic education (4). Students in clinical education should gradually gain experience by being at the patient's bedside (5). In this stage of training, what has been learned is put into practice, skills are taught, and the realities of the work environment can be explained to the learners (6). Students should be able to apply the learned concepts in practice and turn their theoretical knowledge into various mental, psychological, and motor skills that are necessary to care for the client (7).

The presence of any problem in clinical education

reduces the effectiveness of learning, and stress is one of these obstacles (8). Since nursing students spend half of their time learning in clinical settings, conditions should be provided for them to gain useful experience in the clinical environment (9). However, despite the great importance of learning in the clinical environment, the results of many studies have shown that students do not gain the desired experience in this environment (10) but experience many problems during the clinical learning process (11). Therefore, it is worrying that clinical education is considered highly stressful (12).

The clinical environment has variable and unpredictable characteristics, making the students' education inevitably stressful (13). Stress is a natural reaction to the environment (14). The stressful experience of education and the intrinsic stress of the clinical environment, which results from dealing with human lives, expose nursing students to stress, which can have direct and indirect effects on their health and performance (15).

In a study conducted by Lee et al, occupational stress



was introduced as the strongest cause of mental disorders, especially depression (16). Stress is a psychological factor that affects the academic performance and well-being of nursing students. Students commonly have clinical stress, which harms their learning (17,18). Students experience much stress for reasons such as distance from family, economic problems, large numbers of courses, and intense competition (19,20).

Zhang et al showed that nursing students suffer from excessive to moderate anxiety in clinical environments in their interactions with their instructors (21). A study on undergraduate nursing students showed that 17.2% of them had severe stress, and the most stressful factor was personal factors, followed by communication with the instructor (22).

Furthermore, in their study on the main sources of stress and the effect of stressors during training in Spain, Polido Martus indicated the most common sources of stress were high workload and the fear of the unknown, making mistakes, and working with technical equipment (23). According to the problems mentioned, one of the methods to deal with stress is its prevention (24). To prevent stress, it is necessary to know the nature and causes of stress, and it seems that the first step to dealing with the effects of stress is to know its causes, especially through interviews with students (25).

Although clinical education stress has been considered in many quantitative studies, it seems that quantitative research has not been able to provide an accurate understanding of the pathology of the problem despite its persistence and significance. Hence, the present qualitative study was carried out to explain the stressors of the clinical environment of nursing students through students' opinions and experiences in this field.

Materials and Methods

Research design

This qualitative content analysis was conducted to explain the stressors of the clinical education environment among nursing students. Qualitative content analysis is a research method to explore people's understanding of everyday life phenomena and to interpret the content of subjective data (23). It is a suitable method to obtain valid and reliable results from textual data to create knowledge and new insights and provide facts and practical guidance for better performance (26,27).

Setting and participants

The study population consisted of the nursing students of Khalkhal University of Medical Sciences who were studying at the time of the research in 2020. The participants were selected using the purposive sampling method, which is suitable for qualitative research. The inclusion criteria consisted of being a nursing student, completing at least one internship course, willingness to

participate in the study and share experiences, and ability to speak well. Two boys and two girls were interviewed from each group of admitted nursing students (2016–2018). In-depth, face-to-face, and semi-structured interviews were conducted to collect data. The interviews were conducted individually with pre-determined questions, and exploratory questions were also asked depending on the interview process. The interview consisted of two groups of questions, including the main interview questions and the follow-up questions. The main questions included "Please describe the events of one internship day," "What conditions do you remember when I say 'stress in the clinical education environment (internship)'? Tell me about it."

Data collection

Participants were asked to schedule the interview themselves. The interviews were conducted in the faculty and the researcher's office. Only the researcher and the participants were present in the interview. Before the interview, the research objectives, permission to record the interview, voluntary participation, confidentiality of information, and anonymity of the participants were fully explained. The interviews were conducted by the corresponding author, who had 12 years of experience in nursing education and 4 years of experience in conducting qualitative research. All interviews were recorded with participants' full knowledge and consent. At first, participants introduced themselves and were asked about their demographic characteristics, including age, semester, being native or non-native, grade point average, and history of clinical education. Then, a few open questions and questions related to the given phenomenon were asked. Interviews were conducted at the hospital (5 students) and university (11 students). The duration of the interviews ranged from 45 to 70 minutes. After listening to the interview several times, the researchers transcribed it verbatim as soon as possible to provide the necessary feedback for the subsequent interviews and to ensure the adequacy of data. The interviews continued until data saturation was achieved. Data saturation was obtained after 16 interviews.

Data analysis

The qualitative content analysis and the inductive approach of Aloo and Kingas were used for data analysis (Figure 1). The transcripts of the interviews were reviewed several times to be broken down into their smallest constituents and meaningful units (themes). A list of codes was prepared, following which they were reviewed to clarify the similarity in their meanings. They were reviewed again and included in a subcategory based on the similarities found between the codes. Next, the related subcategories were included in one category following the same descending and inductive process. Reviewing

the categories with overlap and merging the primary and final categories were repeated until stable and satisfactory categories and subcategories were eventually obtained.

Trustworthiness

Credibility, dependability, confirmability, and transferability of data were examined to confirm the validity and accuracy of the research (27).

Prolonged engagement, continuous observation, and triangulation add to the validity of the data, and transferability refers to the possibility of using the results in other situations. Therefore, the following measures were taken in the present study: allocating a suitable place and sufficient time for data collection, good communication with participants, verbatim transcription of interviews, using the complementary opinions of colleagues, and the reviewing of the data by participants and other researchers to increase the acceptability of the data. To ensure the accuracy of the findings, the researchers spent enough time collecting the data and continuously increasing the breadth and depth of the information. The ethical research considerations included obtaining relevant permission from Khalkhal University of Medical Sciences, obtaining informed consent to participate in the research, observing the confidentiality of data and avoiding bias, informing participants of their right to withdraw from the research, and preserving the personal identity of participants.

Results

A total of 16 students with an age range of 19–27 years participated in this study. The demographic characteristics of the participants are presented in Table 1.

Seventy-five initial codes were extracted from the research data following the analysis of interviews. After classification, nursing students' experiences of clinical education stress were divided into four general categories, including personal problems, interaction between student and patient, patient's family, instructor, and ward staff, executive planning, and clinical education environment (Table 2).

Among these, personal problems, ward staff problems, and educational problems were the top three factors that played a role in student stress, followed by problems related to the instructors, patients and their companions, hospital environment, and internship group.

Theme 1: Personalized programs in clinical education

One of the stressors in clinical education was the personal problems of students. This general category was extracted from the subcategories of self-harm stress, low self-esteem, and insufficient knowledge and skills. Students' personality traits were one of the most important factors involved in students' stress. Fear of doing the procedure incorrectly, transmission of disease, inability to communicate, and non-native students with different

languages were the most reported factors. Fear of giving the wrong drug, absent-mindedness, forgetting some important points, fear of unemployment, and insufficient knowledge were other facts that students reported.

Participant No. 3: *"I am quite afraid of making mistakes and I ask everything I do not know a hundred times, but*

Table 1. Demographic characteristics of study participants

Demographic characteristics		Number	Percent
Age (y)	18–22	7	43.75
	23–27	9	56.25
Gender	Female	9	56.25
	Male	7	43.75
Internship history (semester)	3–4	4	25
	5–6	4	25
	7–8	8	50

Table 2. Summary of categories and subcategories

Category	Subcategory
Personal problems of students	- Self-harm stresses
	- Low self-esteem
	- Lack of sufficient knowledge and skills
Executive planning of clinical education	- Planning done for clinical education
	- Grouping of students in the clinical setting
Interpersonal interactions with the patient and treatment team	- Interaction with the patients and their families
	- Interaction between the staff and students
	- Interaction with instructors
Clinical education environment	- Unsuitable educational environment
	- Lack of a specific environment for education
	- Lack of specialized wards and cases

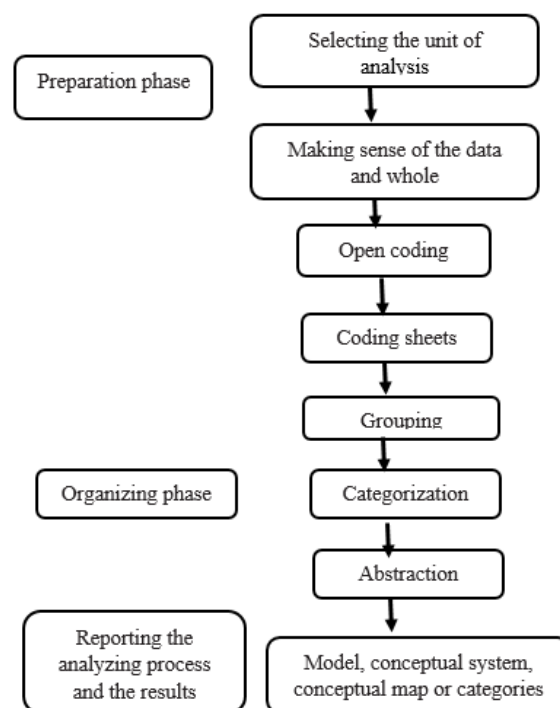


Figure 1. Inductive classification scheme in qualitative content analysis cited in Elo and Kyngäs (2008) (28)

my focus is more on pleasing others, that is, the patients' complete satisfaction. I have been bothered many times by the nurses themselves. They say upsetting things to me, but I always try to take care of the patients".

Theme 2: Executive planning of clinical education

Executive planning of clinical education was the first category developed for the main research subject. This main category was extracted from two subcategories: personalized programs in clinical education and the internship group.

Planning done for clinical education

One of the issues that students reported was the lack of patients and the absence of variety in educational cases. Other problems related to education are the lack of educational facilities, the uselessness of some internship courses, and the overlap of two internship groups in one department.

Participant No. 10: *"Some internships are useless. In general, it is better to plan for some procedures, for example, we went to Ardabil and went to the psychiatric ward for two nine-day periods. Instead, they could have taken us to the blood transfusion ward. I did not know about packed cells. We also went to the neurology ward, but it was a routine task that we did in the internal medicine ward. I did not learn much, but the CCU and ICU were good. We don't have the equipment that they had there."*

Grouping of students in the clinical setting

The students stated that their internship group had never been stressful for them, but the main problem was the large number of students in one group, which was especially noticeable in the lower semesters. They reported that two students working on one patient prevented them from doing their job well as they left the work to their partner. Other problems in the internship group were competition between students and repetitive grouping in each semester while they would have to work with different people after entering the job.

Participant No.12: *"When there are eight or nine students in one group, problems occur among students in providing care for the patients, but in higher semesters, these problems occur less frequently."*

Theme 3: Interpersonal interactions with the patient and treatment team

This main category was extracted from three subcategories, including interaction with the instructors, interaction with patients and their families, and interaction between the staff and students.

Interaction with patients and their families

The most important stressors from students' point of view

included the presence of companions beside the patient, non-cooperation of the patient and their companions, companions' misbehavior, making mistakes in front of patients, worsening of the patient's conditions, awareness of the patient and their companions, and the patients' ignorance and disrespect.

Participant No. 2: *"The fact that the companions stand beside you and say repeatedly that you are a student and you don't understand anything, call your instructor to come to the bedside, we will not let you try more than once"*.

Interaction between staff and students

Lack of clarity, non-cooperation with and disrespect for students, high expectations from students, students' fear of being asked questions, and misbehavior of some physicians were expressed by students as stressors.

Participant No. 14: *"The ward nurses will leave you with tasks that you have not done before, so you are very stressed because you want to do the job correctly. You know what it is, or you do not know!"*

Interaction with instructors

Some participants mentioned that the instructors did not give the students enough independence, which made the learning process less efficient. Some others reported that the absence of an instructor and someone to answer their questions caused them stress. Furthermore, the professor's excessive focus on grades and presentations kept students from doing clinical work and learning practical skills.

Participant No. 1: *"Some instructors are very strict and do not give you enough independence. For example, if we want to find someone's vein, they stand next to you. When the instructor stands next to me, I get anxious. I feel I know nothing about finding the vein because my instructor is standing over me again."*

Theme 4: Clinical education environment

Another stressor in clinical education was the clinical education environment, which included subcategories such as unsuitable educational environment, lack of a specific environment for education, lack of specialized wards, and educational cases.

Participant No. 16: *"During a day of internship, our main focus is on the problems that exist in the ward, such as evasion of responsibility. For example, a nurse who goes to visit a patient first introduces herself, for example, by saying 'I am your nurse, and you can talk to me about whatever you need.' However, the patients in the hospital do not know who their nurses are. This creates duality."*

Discussion

All participants in this study were nursing students of Khalkhal University of Medical Sciences. Recognizing

the environmental stressors and eliminating them in any profession will help the profession to achieve its goals. This is also of particular importance in the nursing profession, which aims to take care of the patient. The internship environment is an opportunity for students to gradually acquire the necessary skills for patient care (29). The most important part of the nursing profession is the students who are being trained to enter this profession. This study showed there are many stressors in the clinical environment for nursing students.

However, Labrague et al showed external and environmental problems play a more effective role in nursing students' stress than personal problems (30). However, the results of this study indicated that the most important source of stress in students was personal problems. The main personal problems among the students were the fear of doing the procedure incorrectly and lack of knowledge about some procedures. Another problem was the inability to communicate with patients, which was more common in non-native students who did not speak Turkish. Onovo reported that language problems experienced by non-native students can negatively affect their academic achievement. Students who experience language barriers may also experience challenges in using expressions, communicating or understanding patient requests, and providing clinical explanations (31). Learning life skills increases self-confidence and reduces risky behaviors. To make the training more effective, it is necessary to pay attention to the characteristics of the learners and use different teaching methods for them (32). The findings of Goliroshan and colleagues' study showed that education based on the identification of students' educational needs improved their learning (33).

The next problem expressed by the students was the concern about needlestick injury and the spread of infectious diseases. In their study on the prevalence of students' dealing with needles, Alimohamadi et al reported a high rate of damage caused by sharp objects among students and stated that there was no training on prevention and post-injury measures in the faculty (34). Therefore, it seems that the lack of adequate training in prevention and post-injury measures by instructors is the main cause of stress.

In particular, the practical aspects of awareness are directly related to the reduction of psychological stress. Therefore, regardless of formal and informal practices, nursing educators should assist students in developing this aspect as a tool for stress management (35).

Students also cited disrespect for students and nurses' lack of cooperation as factors causing stress. Aliafsari Mamaghani and Zamanzadeh showed that the performance of instructors and the staff's lack of cooperation could cause much stress in students (36).

In a comprehensive review, Bhurtun et al identified instructors and nursing staff as strong stressors. Nursing

staff can guide students and create a more supportive clinical environment (37). Aliafsari Mamaghani and Zamanzadeh also reported the need for nursing staff's cooperation with students in clinical education (36).

A study by He et al on nursing students in Australia indicated that first-semester students experienced less stress than those in other semesters (38). However, the present study showed that the lower-semester students experienced more stress with more limited factors such as the large number of students in each group and the lack of educational items, while the higher-semester students expressed more problems from a broader perspective, such as the lack of clarity in the value and position of nursing.

Coordination between education and clinical practice seems to be very important, but due to the inadequate basic science courses such as anatomy, physiology, and pharmacology as well as the difficult nature of nursing education after entering the hospital and attending the patient's bedside, nurses are not ready to practically use the lessons taught and feel that the tasks assigned to them are not in line with their job description (35).

Students believed there was a difference between theoretical teaching and practice (39). The existence of this gap between theoretical and practical courses among students of Khalkhal University of Medical Sciences also led to complaints and resentment in them. The scientific and clinical competence of the instructor was one of the effective factors in clinical education from students' point of view (40).

According to the results of the present study, there are numerous clinical stressors in the School of Nursing. The related authorities should identify these stressors and adopt appropriate strategies to eliminate or reduce them. In the meantime, the role of the instructor should not be ignored. As an instructor can play a valuable role in reducing stress and facilitating students' learning, training the instructors and using experienced instructors can be major steps by the educational system to reduce nursing students' stress (41). Education experts recommend that more emphasis be placed on clinical education in nursing and other health departments because most of the problems of these groups are related to clinical education (42).

One of the limitations of the present study was that some students refused to provide complete information and engaged in self-censorship, which was somewhat resolved by assuring them that their information would be kept confidential. The main purpose of the study was to explain the experiences of nursing students, but paying attention to the views of others, including educators, may add to the richness of information.

Conclusion

The results of this study showed that nursing students

have unfavorable experiences of stress in their clinical education. Perceived stress plays an important and effective role in clinical education among these students.

Nursing students believe that reducing the gap between theory and practice along with the support of the nursing staff and instructors in their clinical education reduces the stress in their clinical education. Moreover, appropriate planning and adequate preparation reduce students' clinical education problems. Stress has adverse effects on the quality of clinical education and forms serious barriers to the development of individual and professional skills of nursing students; the results of this study can help to reduce stress in clinical nursing education.

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Competing Interests

The authors declared no conflict of interest in the present study.

Ethical Approval

This article was the result of a student research project approved by the Research Department of Khalkhal University of Medical Sciences under the ethical code IR.KHALUMS.REC.1399.008.

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