

# The Challenges Experienced by Nursing Students in Clinical Learning Environment and Their Suggestions\*

## Hemşirelik Öğrencilerinin Klinik Uygulama Öğrenme Ortamında Yaşadıkları Güçlükler ve Önerileri

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### Abstract

**Aim:** The aim of the study was to determine the challenges experienced by nursing students in the clinical learning environment and their suggestions.

**Method:** The study was carried out with 249 nursing students between November 2019 and March 2020 at a university in Turkey using a 62-item questionnaire developed by the researchers.

**Results:** 49.8% of the participants experienced challenges during clinical practice that are related to the nurses (37.5%), the hospital (27.0%), and theoretical education (13.5%), and they believe that their challenges could be partially resolved (46.6%). 70.7% of the participants stated that they could partially transfer what they learned in the classroom to their clinical practice. All the participants who reported an event that affected them in the clinic (67.5%) gave an example of a negative event and most of these events were related to the attitudes and behaviors of the nurses. Their suggestions for better clinical practice were to increase the number of practice lessons and more innovative and technology-based training methods used in accordance with the technological developments of the digital age.

**Conclusions:** There are considerable challenges and obstacles that nursing students face in the clinical learning environment that can affect their competence and learning. It can be said that new technological and innovative teaching techniques should be developed to overcome these obstacles and challenges.

**Keywords:** Clinical skill, education, nursing, nursing care, student.

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### Öz

**Amaç:** Araştırmanın amacı, hemşirelik öğrencilerinin klinik uygulama öğrenme ortamında yaşadıkları güçlükleri ve önerilerini belirlemektir.

**Yöntem:** Araştırma, Kasım-2019 ve Mart-2020 tarihleri arasında Türkiye’de bir üniversitede 249 hemşirelik öğrencisi ile araştırmacılar tarafından geliştirilen 62 maddelik anket kullanılarak gerçekleştirilmiştir.

**Bulgular:** Katılımcıların %49,8’i klinik uygulama sırasında hemşireler (%37,5), hastane (%27,0) ve kuramsal eğitim (%13,5) ile ilgili güçlük yaşadıkları ve bu güçlüklerin kısmen çözülebileceğine inandıkları (%46,6) belirlenmiştir. Katılımcıların %70,7’si sınıfta öğrendiklerini kısmen klinik uygulama ortamına aktarabildiklerini belirtmiştir. Klinikte kendilerini etkileyen bir olay bildiren katılımcıların tamamı (%67,5) olumsuz olay örneği vermiş olup bu olayların çoğunun hemşirelerin tutum ve davranışları ile ilgili olduğu belirlenmiştir. Katılımcıların daha iyi klinik uygulamalar için önerileri, uygulama derslerinin artırılması, dijital çağın teknolojik gelişmelerine uygun olarak daha yenilikçi ve teknolojik eğitim tekniklerinin kullanılmasıydı.

**Sonuç:** Hemşirelik öğrencilerinin klinik uygulama öğrenme ortamında karşılaştıkları, öğrenmelerini ve yeterliliklerini etkileyebilecek önemli engeller ve güçlükler vardır. Bu engel ve güçlükleri aşmaya yönelik teknolojik ve yenilikçi eğitim tekniklerinin geliştirilmesi gerektiği söylenebilir.

**Anahtar Sözcükler:** Klinik beceri, eğitim, hemşirelik, hemşirelik bakımı, öğrenci.

### Introduction

Nursing is a hands-on profession that requires a meaningful combination of theoretical content with practical skill, and these two complements each other (Uzelli Yılmaz & Akın Korhan, 2017). Nursing education enables nursing students to acquire appropriate knowledge, skills, communication, and behaviors and have a huge impact on community health (Jamshidi, Molazem, Sharif, Torabizadeh & Kalyani, 2016; Moghaddam, Aghamohammadi, Jafari, Absalan & Nasiri, 2020). Clinical practice training includes a large part of nursing education and is mostly carried out in clinical environments (Jamshidi et al., 2016). The aim of the clinical practice training is to enable students to transfer what they have learned in theoretical education into practice, to identify and solve problems, to develop their skills, and facilitate the development of competencies. The purpose is to train nurses who can adapt to and be successful in the ever-changing practice environment (Ali & Ali, 2017; Günay & Kılınc, 2018; Landeen et al., 2016).

The importance of the clinical learning environment for quality nursing education has long been recognized. Interest in improving clinical learning environments has increased over the last two decades (Sundler et al., 2019; Yazdankhahfar, Ravanipour ve Mirzaei, 2020). However, problems with both theoretical training and clinical practice training are reported in the literature, and these problems affect students’ learning, causing them to experience challenges in the clinical practice setting (Drateru, 2019; Panda et al., 2021; Uzelli Yılmaz & Akın Korhan, 2017). Unsuitable programming of clinical education and organisational shortcomings, inappropriate clinical evaluation, unsupportive learning environment, inadequate clinical supervision, and difficulties in transferring theoretical knowledge into clinical practice are viewed as obstacle in clinical learning (Panda et al., 2021). In the literature, it is stated that the reasons for challenges experienced by nursing students include a lack of clinical practice areas, a shortage of professional nurses and instructors, high number of nursing students, negative approaches of healthcare personnel, communication problems, insufficient laboratory, and classroom environments (Drateru, 2019; Günay & Kılınc, 2018; Lethale, Makhado & Koen, 2019; Phuma-Ngaiyaye, Bvumbve & Chipeta, 2017; Uzelli Yılmaz & Akın Korhan, 2017). The clinical environment is complex, dynamic, and rapidly changing and includes a variety of new settings and roles in which students must be prepared to practice (Drateru, 2019; Moghaddam et al., 2020). In the study conducted by Moghaddam et al. (2020) it is reported that experiencing inappropriate social norms (such as inadequate cohesion among nurses, mutual disrespect, megalomania, abuse, mutual mistrust, and false patterning.) in the clinical environment, lack of nurses and inadequate time of nurses to meet the educational needs of nursing students will lead to deterioration of the student-nurse relationship, and ultimately deterioration of clinical education. In the study by Drateru (2019) in Uganda, it was stated that the challenges experienced by nursing students in skills acquisition were related to issues in the learning opportunities and clinical environment. Among the issues they stated that the lack of educators and clinical staff, little support supervision, shortage of materials, problems with student distribution, the deficiency of role models, shortage of time for experiencing the clinical environment, problems with interpersonal relationships, and the gaps between theoretical education and practice. In addition, in the literature, lack of collaboration and/or poor communication between the students, educators, and clinical staff, issues with the instruction they receive, the number of students, and organizational quality were identified as some of the main factors that negatively affect the students’ learning (Ali & Ali, 2017; Panda et al., 2021). The challenges experienced by student nurses differ from country to country, even though some challenges are universal (Drateru, 2019; Gao, Zhang, Wen & Chen, 2017; Panda et al., 2021). Challenges in the clinical learning environment are forcing the nursing infrastructure to examine new learning methods and

models for clinical practice (Ekstedt, Lindblad, Löfmark, 2019; Landeen et al., 2016; Uzelli Yılmaz & Akın Korhan, 2017). Landeen et al. (2016) found that a curriculum change facilitated students' ability to combine many aspects of knowledge, skills, and reasoning that enabled highly effective nursing practices and greater professional confidence. Uzelli Yılmaz and Akın Korhan (2017) reported that simulation-based education positively contributed to students' knowledge level, psychomotor and communication skills, satisfaction, and self-confidence.

There are numerous studies in the literature regarding the challenges of nursing students in the clinical learning environment (Baraz, Memarian & Vanaki, 2015; Drateru, 2019; Moghaddam et al., 2020). Most recently, technological, and scientific developments are creating intergenerational differences, the "Z" generation progresses its education through university with its close relationship to technology. Most students have computers and smartphones, actively use websites, and participate in online socializing and this generation very closely related to technology. To increase the quality of education and to adapt to the changes needed in education, to describe and meet the needs of the current generation, it is necessary to carry out intermittent studies on the challenges experienced by students. To determine the challenges faced by nursing students and to contribute to the practices needed to solve these challenges, new educational techniques, including technology need to be developed to meet the needs of this generation.

## Method

**Aim of the Study:** The aim of this study is to determine the challenges of nursing students in the clinical practice learning environment and their suggestions.

**Research Design:** A descriptive research design was used in this study.

**Research Questions:** The study sought answers to the questions,

- What are the challenges of nursing students in the clinical practice learning environment? and
- What are the suggestions of nursing students for better clinical practice and learning environment?

**Location and Time of the Study:** The research was conducted between November-2019 and March-2020 in the state university in Kırıkkale (Turkey).

**Population and Sample:** No sampling was performed, and all nursing students who experienced clinical practice were included in the study. First graders experience clinical practice in the second half-year (from March to June). The university decided to continue its education online, and clinical practice training could not be done due to the COVID-19 pandemic. First-year students were not included in the study because they did not experience clinical practice. The study was conducted with a total of 249 (72.2%) out of 345 students who agreed to participate in the study. The inclusion criteria were (1) a volunteer, (2) aged 18 or older, (3) having experience of clinical practice.

**Data Collection Instruments:** Data were collected using the "Data collection form" (DCF), developed by the researchers based on a literature review (Baraz et al., 2015; Drateru, 2019; Ekstedt et al., 2019; Landeen et al., 2016; Lethale et al., 2019; Phuma-Ngaiyaye et al., 2017; Uzelli Yılmaz & Akın Korhan, 2017). The DCF consisted of 62 questions/statements containing open-ended questions (six questions) and three parts. The first part includes questions about the sociodemographic data of the participants and their experiences and challenges in clinical practice (13 questions). In the second part of the form, there are some statements using a Likert type scale, designed for the participants to answer the statements regarding the clinical practice as "agree", "undecided", and "disagree" (44 statements). In the third part, there were questions to elicit the participants' suggestions associated with their education, instructors, hospital, and nurses for better clinical practice (five questions). For the content validity of the form, 3 expert evaluations were taken, and the form was finalized in line with the evaluations. After the questionnaire was altered and arranged, a pilot study was performed on 20 students to check the clarity and intelligibility of the questions, describe the problems that may be encountered during the collection of the data. Students who participated in the pilot study were included in the study since no structural changes were made in the questionnaire and no additions or deletions were made in the questions.

**Data Collection:** Nursing students who agreed to participate in the study were asked to complete the DCF. It took about 15 to 20 minutes to fill out the form.

**Data Analysis:** Data were analyzed using the Statistical Package for Social Sciences (SPSS), version 15.0. In the analysis of the data, number, and percentage distributions, mean and standard deviation values were used. The responses of all the participants to the open-ended questions were written directly beneath the relevant questions to allow appropriate evaluation. These answers/statements were then evaluated, named and/or classified by the researchers. These classifications were evaluated as numbers and percentages, as shown in Table 1.

**Ethical Consideration:** The study was conducted according to the ethical principles outlined by the World Medical Association's Declaration of Helsinki, and it was approved by the Non-Interventional Clinical Studies Ethics Committee of the university (Approval No: 2019/11/02). Participants were informed about the purpose, content, method, scope, duration of application, and confidentiality of the study prior to participation a written consent was obtained from all participants.

## Results

**Table 1. Sociodemographic characteristics of participants and features about their clinical practice experience (N: 249)**

Characteristics	Mean (SD)
Age, years	20.7 ± 1.2
<b>n (%)</b>	
<b>Gender</b>	
Female	213 (85.5)
Male	36 (14.5)
<b>High school education</b>	
Nursing high school	38 (15.3)
Others	211 (84.7)
<b>Which grade student?</b>	
2.th	91 (36.5)
3.th	90 (36.1)
4.th	68 (27.3)
<b>Working as a nurse?</b>	
Yes	9 (3.6)
No	240 (96.4)
<b>Factors that increase the learning related to the practice during the lesson*</b>	
When the use of tools and material support while the subject is being explained	183 (35.1)
When the amount of visual material in the lesson is excessive	164 (31.5)
When the question-and-answer technique is used in a lesson	78 (15.0)
When the subject is explained using role-play and drama	75 (14.4)
When group work is done	21 (4.0)
<b>Experiencing challenges during clinical practice?</b>	
Yes	124 (49.8)
Partially	118 (47.4)
No	7 (2.8)
<b>What was the challenges about?*</b>	
Challenges with nurses working in clinics	206 (37.5)
Challenges regarding hospital (functioning, procedure, possibilities, etc.)	148 (27.0)
Challenges arising from theoretical education	74 (13.5)
Challenges associated with myself	68 (12.4)
Challenges arising from the instructor	42 (7.7)
Others (patients and relatives, other health care professionals)	11 (2.0)
<b>Thinking that challenges/problems can resolve?</b>	
Yes	99 (39.8)
Partially	116 (46.6)
No	34 (13.7)

\*Participants gave more than one answer.

**Table 1. Continued**

Characteristics	Mean (SD)
<b>Do you able to transfer what you learn in the lesson to the clinical practice?</b>	
Yes	52 (20.9)
Partially	176 (70.7)
No	21 (8.4)
<b>The reason for the inability to transfer what is learned to the clinical practice?*</b>	
Nurses have unsupported attitudes and behaviors, having students to do ordinary practice, giving no opportunity to practice	58 (38.9)
What is done in clinical practice is different from what is learned	37 (24.8)
Inadequate facilities of the hospital	22 (14.8)
Fear of doing wrong in practice and harming the patient	13 (8.7)
High number of students in the clinic	7 (4.8)
Lack of theoretical knowledge, non-permanent knowledge	5 (3.3)
Patients do not want to practice the student	4 (2.7)
In practice, the instructor is not with the student	3 (2.0)
<b>What was the subject of an important event that affected you in the clinic?*</b>	
Motivational lowering, non-supportive, work-oriented, non-teaching, non-primary patient-oriented, simple job-sanctioning behaviors of nurses	127 (61.0)
Patients' point of view to the student, negative, non-supportive behaviors	24 (11.5)
Making different practices than learned and forcing students to do these practices	17 (8.2)
The student is not valued by the hospital	12 (5.8)
Not having the opportunity to practice in the clinic	8 (3.8)
Negative behavior of other health professionals	7 (3.4)
Conflict on the expectations of the instructor with the work expected in the clinic	7 (3.4)
Instructor's unsupported behavior	6 (2.9)
<b>Suggestions associated with education for better clinical practice*</b>	
More emphasis on practice in the course, more care should be taken	79 (30.4)
The practices must first be done in the nursing skills lab (using a simulator) which is very similar to the clinical environment	66 (25.4)
Innovative and technological training techniques should be used (rich in visual material, applied demonstrations, video, role play, simulation of scenarios in the hospital etc.) parallel with the technological developments of the age	58 (22.3)
There should be a system that we can apply in the hospital, whatever we see in education, there should be a course-specific internship area, the internship area should increase	23 (8.8)
Instructor should be with me more in practice	10 (3.8)
Theoretical education should be updated and improved	7 (2.7)
There should be fewer students in practice	5 (1.9)
Practice should be started after the theoretical knowledge is completed	5 (1.9)
Number of instructors should increase	3 (1.3)
Others (Before the practice, the hospital should be introduced (2), there should be no notes in the practice (1), there should be a focus on the communication skills of the students (1)	4 (1.5)
<b>Suggestions associated with hospital for better clinical practice *</b>	
Hospital should be more developed, wider, have high standards, and have more clinical learning environment	75 (34.6)
Hospital management should support and value the student	43 (19.8)
The physical conditions and facilities of the hospital should be planned according to the student	41 (18.9)
It should be school-hospital collaboration	26 (12.0)
Practice in the hospital should be the same as learned in education	17 (7.8)
The hospital should pay attention to cleanliness and hygiene	8 (3.7)
All staff should be trained in knowledge, skills, and communication, and training should be made continuous	7 (3.2)

\*Participants gave more than one answer.

**Table 1. Continued**

Characteristics	Mean (SD)
<b>Suggestions associated with clinical nurses for better clinical practice*</b>	
Communication with the student and behaviors should be educational, instructive, supportive, understanding, valuing, and encouraging	135 (62.8)
Nurses should be with the student in all the practices and should give the student the chance to practice	42 (19.5)
Nurses should be knowledgeable enough to guide the student, update their knowledge without any difference between theoretical and application, and be aware of their responsibilities	38 (17.7)
<b>Suggestions associated with the instructor for better clinical practice *</b>	
Instructors should be with the student during the practices	82 (40.0)
Instructors communication should be supportive, educational, motivating and encouraging	41 (20.0)
The number of instructors should be proportional to the number of students	20(9.8)
The instructor should use different materials (educational, developer, visual) in education	15(7.3)
Giving more importance to practice skills training	14 (6.8)
Every practices learned in the course should be applied to every student in a clinical learning environment	12 (5.6)
The practices should be done in the nursing skills lab before being applied in the hospital	8 (3.9)
The instructor's expectations from the student should be reasonable	8 (3.9)
The instructor should have up-to-date information and be open to self-improvement and innovations	5 (2.4)

\*Participants gave more than one answer.

Data were collected from 249 nursing students that had experienced clinical practice. Of the participants, 85.5% were female, 36.5% were second-year students, 12.9% graduated from nursing high school, 3.6% still worked as a nurse, and the mean age of participants was  $20.7 \pm 1.2$  years. The factors that increased the participants' learning related to the practice were the use of tools and material support, while the subject was being explained (35.1%) and when the visual materials in the subject were too much (31.5%). 49.8% of the participants experienced challenges during clinical practice, which related to the nurses (37.5%), the hospital (27.0%), and the theoretical education (13.5%), but they believed that their challenges could be partially resolved (46.6%). It was determined that 70.7% of the participants could partially transfer what they learned in the course to their clinical practice; 127 of the participants reported the reason for the inability to transfer what was learned to the clinical practice: 38.9% of the participants stated that nurses had unsupportive attitudes and behaviors, having students do ordinary practice and not allowing them to practice their newly learned skills. Participants were asked to write about an incident or event they encountered, and which affected them in the clinic. 168 (67.5%) participants answered this question, and all wrote about a negative event. The events affecting the participants were mostly related to the motivational lowering, non-supportive, work-oriented, non-teaching, non-primary patient-oriented, simple job-sanctioning behaviors of nurses (61.0%) and patients' perspective to the student, with negative, non-supportive behaviors (11.5%) (Table 1).

For a better clinical learning environment, participants made suggestions which were about education ( $n = 201$ ), hospital ( $n = 193$ ), nurses ( $n = 207$ ), and instructors ( $n = 185$ ). Most of the participant's suggestions associated with the practice were there should be more practice, and more care should be taken to the practice, with more emphasis on practice in the course (30.4%). Ideally, the practice should first be done in the nursing skills lab (using a simulator) which is very similar to the clinical environment (25.4%) and innovative and technological training techniques should be used (rich in visual material, applied demonstrations, virtual reality, mobile game based virtual reality, video, role play, simulation of scenarios in the hospital etc.) parallel with the technological developments of the age (22.3%). Their suggestions about the hospital were that they should be more developed, have higher standards, and have more clinical learning environments (34.6%). Their suggestions about nurses were mostly about that nurse's communication with the student and their behaviors, which should be educational, instructive, supportive, understanding, valuing, and encouraging (62.8%). Most of the participants (40.0%) made suggestions that the instructors should be with the student during the practice sessions (Table 1).

**Table 2. The findings of the participants regarding the challenges experienced in clinical practice and their opinions (N: 249)**

Statements (S)	Agree	Undecided	Disagree
	n (%)	n (%)	n (%)
S1: I think the physical conditions of the hospital are not suitable for clinical practice training	153 (61.4)	53 (21.3)	43 (17.3)
S2: I have a clinical nurse with me in any practice in the hospital	39 (15.7)	42 (16.9)	168 (67.5)
S3: I think the training I received is not enough for clinical practice	57 (22.9)	77 (30.9)	115 (46.2)
S4: In clinical practice, discrimination is made between students of different professions	152 (61.0)	44 (17.7)	53 (21.3)
S5: Experiencing practice in extracurricular clinics makes it difficult for us to transfer what we learned in that lesson to practice	135 (54.2)	44 (17.7)	70 (28.1)
S6: Not being sociable as a personal feature has a negative effect on my clinical practice skills	79 (31.7)	40 (16.1)	130 (52.2)
S7: I think that technological developments should be integrated into our practical training	212 (85.1)	23 (9.2)	14 (5.6)
S8: Having nurses with us during clinical practice makes me more courageous in practice	196 (78.7)	25 (10.0)	28 (11.2)
S9: I often learn in the clinic through trial and error	123 (49.4)	62 (24.9)	64 (25.7)
S10: I think the instructor does not support the students when there is a problem in the clinical setting	87 (34.9)	73 (29.3)	89 (35.7)
S11: Sometimes I don't know how to treat the patient in practice	121 (48.6)	70 (28.1)	58 (23.3)
S12: I have a communicating problem with nurses in the clinic	82 (32.9)	70 (28.1)	97 (39.0)
S13: I have a communicating problem with patients in the clinic	37 (14.9)	60 (24.1)	152 (61.0)
S14: I think I couldn't get the opportunities to develop skills in clinical practice	113 (45.4)	67 (26.9)	69 (27.7)
S15: I think the instructor does not have clinical skills to provide my clinical development	42 (16.9)	53 (21.3)	154 (61.8)
S16: I think that the nurses in the clinic could not give us the opportunity to practice because of the workload	147 (59.0)	46 (18.5)	56 (22.5)
S17: Before starting clinical practice, we should prepare with techniques that will increase our application skills	225 (90.4)	16 (6.4)	8 (3.2)
S18: The fact that instructors spend more time with us in the clinic increases my clinical practice skills	181 (72.7)	41 (16.5)	27 (10.8)
S19: The workload of the nurse in the hospital makes it difficult for me to perform clinical practice	122 (49.0)	66 (26.5)	61 (24.5)
S20: I have a lot of fear when applying drugs to patients	61 (24.5)	55 (22.1)	133 (53.4)
S21: I think our total duration of clinical practice experience for each course is very short	51 (20.5)	54 (21.7)	144 (57.8)
S22: Nurses give the student the opportunity to practice	101 (40.6)	89 (35.7)	59 (23.7)
S23: I think the disturbing behavior of healthcare professionals other than the nurse affects my compliance with the practice	144 (57.8)	59 (23.7)	46 (18.5)
S24: "The fact that the clinical practices we experience in the hospital are different from what we learned in the course is an important factor that negatively affects our learning	207 (83.1)	27 (10.8)	15 (6.0)
S25: I think the clinical environment is far below my expectations to improve my practice skills	167 (67.1)	62 (24.9)	20 (8.0)
S26: I think that different training techniques should be tried for better clinical practice	195 (78.3)	46 (18.5)	8 (3.2)
S27: Challenges in practice can be resolved by using different training techniques	208 (83.5)	34 (13.7)	7 (2.8)
S28: There are many practices that we experience in education but not practice in the clinical environment	224 (90.0)	15 (6.0)	10 (4.0)
S29: We need to see a role model in the clinic	228 (91.6)	17 (6.8)	4 (1.6)
S30: Having more than one class in the same clinic in the hospital makes our clinical practice difficult	195 (78.3)	34 (13.7)	20 (8.0)
S31: I think our instructor doesn't care enough about us	51 (20.5)	92 (36.9)	106 (42.6)
S32: I feel I have no importance/place in the clinical setting	65 (26.1)	62 (24.9)	122 (49.0)
S33: I think the instructor treats students hard in the clinical setting	57 (22.9)	54 (21.7)	138 (55.4)
S34: "The practices that we experience in education but not in practice should be presented to us in a nursing skills lab	217 (87.1)	22 (8.8)	10 (4.0)
S35: I don't feel I'm valued in clinical practice	128 (51.4)	56 (22.5)	65 (26.1)
S36: I get anxious and stressed before going into clinical practice	110 (44.2)	61 (24.5)	78 (31.3)

**Table 2. Continued**

Statements (S)	Agree	Undecided	Disagree
	n (%)	n (%)	n (%)
S37: I think the student should be supported more by the instructor in the field of practice	220 (88.4)	21 (8.4)	8 (3.2)
S38: I think that I couldn't improve my skills because the materials I need to use in the hospital are inadequate	142 (57.0)	56 (22.5)	51 (20.5)
S39: I think I'm a burden in clinical practice	66 (26.5)	45 (18.1)	138 (55.4)
S40: Sometimes I don't know what to talk about or what not to talk about, next to the patient	68 (27.3)	50 (20.1)	131 (52.6)
S41: Especially when applying nursing interventions to a patient who has undergone surgical procedures, I am afraid of harm the patient and not being able to behave appropriately for their surgery.	156 (62.7)	37 (14.9)	56 (22.5)
S42: Nurses in the clinic discriminate between different student groups practicing	166 (66.7)	51 (20.5)	32 (12.9)
S43: "I think that being able to train and practice in an environment similar to the hospital environment will improve our practice skills"	228 (91.6)	18 (7.2)	3 (1.2)
S44: The practice skill steps I learned at school and the practices in the hospital are different	194 (77.9)	45 (18.1)	10 (4.0)

The findings of the participants regarding the challenges experienced in clinical practice and their opinions are summarized in Table 2. The participants mostly replied as "agree" to the items that "We need to see a role model in the clinic" (91.6%), "I think that being able to train and practice in an environment similar to the hospital environment will improve our practice skills" (91.6%), "Before starting clinical practice, we should prepare with techniques that will increase our practice skills" (90.4%), "There are many practices that we experience in education but not practice in the clinical environment" (90.0%), "I think the student should be supported more by the instructor in the field of practice" (88.4%), "The practices that we experience in education but not in practice should be presented to us in a nursing skills lab" (87.1%), "I think that technological developments should be integrated into our practical training" (85.1%), and "The fact that the clinical practices we experience in the hospital are different from what we learned in the course is an important factor that negatively affects our learning" (83.1%) (Table 2)

## Discussion

Nursing education consists of clinical practice education that allows to students to acquire skills and theoretical education to increase their knowledge. These are two integral components of the nursing curriculum and enable nursing students to become qualified practitioners in a healthcare setting (Lethale et al., 2019). There are many factors affecting nursing students' learning. Some of these factors are individual factors such as interest, willingness, ability to work, etc., which are under the control of the individual, while others are external factors such as education curriculum, clinical learning environment, instructors, etc (Ali & Ali, 2017; Perry, Press, Rhotinsky, Compton & Sedgwich, 2016). In the current study, participants stated that the factors which increased learning related to practice were the use of tools and resources and visual materials more during the lesson (Table 1). Supporting the "traditional" education methods with more visual materials and tools in the classroom environment could increase learning for this younger generation of students who are highly familiar with technological methods.

Because the majority of nursing education is carried out in clinical learning environments, clinical learning is an essential, crucial and integral component of education in which nursing students integrate theory and practice (Drateru, 2019; Lethale et al., 2019). In a frequently changing nursing education environment, nursing students require support to develop interaction, reflection, decision making, communication, critical thinking, and problem-solving (Landeem et al., 2016; Lethale et al., 2019). However, problems were reported with both the theoretical and clinical learning environments (Baraz et al., 2015; Drateru, 2019; Kalyani, Jamshidi, Molazem, Torabizdeh & Sharif, 2019; Panda et al., 2021). The fact that most of the participants were able to partially transfer what they learned in the course to clinical practice suggests that there are problems with both the theoretical education and clinical learning environments. Most of the participants reported that the cause of this situation was the non-supportive attitude and behaviors of nurses and differences in clinical practice with what was learned in the classroom (Table1). In the study conducted by Günay and Kılınc (2018), it is determined that nursing students found their clinical knowledge and skills insufficient and usually failed to transfer their theoretical knowledge into clinical practices.



Clinical settings inevitably have challenges that are different from those encountered in lessons (Baraz et al., 2015; Drateru, 2019; Kalyani et al., 2019). In this study, almost all of the participants experienced challenges, whether partially or completely, during their clinical practice, which was mostly related to the nurses, hospital, and theoretical education, and findings were consistent with the literature (Baraz et al., 2015; Drateru, 2019; Kalyani et al., 2019; Panda et al., 2021). Nearly half of the participants thought that these challenges could be partially resolved (Table 1). In the systematic review and meta-synthesis study conducted by Panda et al. (2021), fourteen studies reported on students' concerns over the inconsistencies between the knowledge gained in the classroom and the reality in clinical practice. In the current study, participants stated that doing different practices than those learned and forcing them to do this practice was an important negative event encountered in the clinic, and differentiation between theoretical education and clinical practice affected their learning. In addition, most of the participants stated that they agreed with the statements on this subject in Table 2 (S24, S44). In the study conducted by Drateru (2019), it is stated that the gap between theory and practice is the major challenge in education. Many nursing students were not satisfied with the way the theoretical basis was being integrated into practice. Despite a lot of theoretical training, they did not have adequate opportunities to practice. Student nurses often found themselves torn between the demands of their instructors and practicing nurses in real clinical situations and are unable to transfer what they learned in theory to the clinic. Differences between theory and practice can result in incorrect, incomplete, or risky practices. For this reason, whether the source of these differences is theoretical education or clinical practice environment should be investigated and compared. Nurses make up most of the group of professionals within the healthcare workforce and provide effective healthcare services to populations, but this demands a well-trained and collaborative nursing workforce (Fawaz, Hamdan-Mansour & Tassi, 2018). Moreover, during the COVID-19 pandemic, the importance of the healthcare workforce, especially the need for well-educated nurses, has been emphasized. The goal of well-trained nurses who are expected to be involved in the healthcare workforce cannot be achieved with nearly all of the nursing students experiencing challenges in clinical practice during undergraduate education and with differentiation between theoretical education and clinical practice. Therefore, it is clear that instructors, educational institutions, hospital and faculty administrations, and clinical nurses should take steps to create a better clinical practice environment through collaboration, a process that is recommended in the literature (Fawaz et al., 2018; Lethale et al., 2019).

Undergraduate nursing students have expectations that an innovative, creative, and supportive clinical learning environment can be achieved when instructors cooperate with clinical nurses (Lethale et al., 2019). Lethale et al. (2019), revealed that nursing outcomes could be improved when the collaborative implementation of nursing education exists between academic and clinical practice. In this study, some of the participants stated that there should be a school-hospital cooperation in their suggestions about the hospital (Table 1). They stated that when there is a cooperation between the school and the hospital, they believe that the clinical nurses' point of view towards the nursing student will change, and they can support student nurses more. Academic clinical partnership improves competencies among students and the safety and health outcomes of patients. When nursing education is implemented in an academic and clinical partnership, it becomes relevant to the needs and demands of the healthcare system (Bvumbwe, 2016). Below are some examples of statements from participants:

"I think nurses will support us more if our instructors cooperate with the hospital management, express our expectations, establish good relations with clinical nurses before we start the clinical practice". (No. 175, female, third-grade student, aged 23)

Actually, the quality of the learning environment depends on a variety of factors, such as the capacity to provide opportunities for students to learn by nurses and instructor support (Lethale et al., 2019; McSharry & Lathlean, 2017). Participants reported that nurses make students do ordinary practice and not provide opportunities for the practice of new skills. The majority of the participants also reported that the subject of an important event that affected them in the clinic was motivational lowering, non-supportive, work-oriented, non-teaching, simple job sanctioning behaviors of nurses, and not having the opportunity to practice in the clinic (Table 1). More than half of the participants also thought that the nurses in the clinic could not allow them to practice because of their workload (S16), and nearly half of them thought that they could not get the opportunities to develop skills in clinical practice (S14) (Table 2). In one study, participants stated that some nurses' negative attitudes and behaviours towards the students' presence in the clinic, lack of support, and the distrust of the nurses and patients caused an uncomfortable and unsupportive environment in clinics which were negatively affected students (Kalyani et al., 2019). In the study conducted by Dadgaran, Parvizy & Peyrovi (2012), participants believed that if nursing staff possessed up-to-date knowledge, practical information, patience, an appropriate and respectful attitude toward students, and interacted appropriately with students, they could have a significant impact on students' clinical performance. They also stated that they would make fewer mistakes and that their stress levels would be lower when being supervised by nurses. It is clear that clinical nurses play a big role in nursing education as well as instructors. Participants' suggestions associated with clinical nurses aimed at improving clinical practice were related to communication and behaviors with students, which should be educational, instructive, supportive, understanding, valuing,

and encouraging. According to Baraz et al. (2015), nursing students complained about the non-supportive relationship of not only the clinical nurses, but also with their instructor and our findings were similar. Students also expressed that the non-supportive learning environment was the most important challenge of clinical learning. In the current study, some of the participants also thought that the instructor did not support the students when there was a problem in the clinical setting (S10), and the majority of them thought that the students should be supported more by the instructor in the field of practice (S37) (Table 2). In the study conducted by Dadgaran et al. (2012), participants stated that instructors required up-to-date knowledge, patience, self-confidence, clinical skills, self-determination. They should interact with students and nurses, and give students the opportunity to carry out practical tasks and apply appropriate clinical knowledge, in order to reduce the theory-practice gap (Dadgaran et al., 2012). In the current study, participants' suggestions associated with instructors were that instructors should be with the student during applications, and communication should be supportive, educational, motivating, and encouraging (Table 1). Since clinical learning is applied in a dynamic and complex environment, it is challenging, unpredictable, stressful, and constantly changing. Negative clinical experiences affect trust, behavior, attitude, and learning (Drateru, 2019). Continuous support, close guidance, and one-on-one learning opportunities can enhance students' learning. Similarly, the basis determinants for student satisfaction of their clinical learning experience have been reported as having quality clinical facilitator support and the presence of a range of clinical learning opportunities (Phuma-Ngaiyaye et al., 2017).

The main purpose of nursing education is to develop confident nurses who are competent to provide safe and effective healthcare services for society (Bvumbwe, 2016). Therefore, nursing education needs to be aligned with the clinical setting to ensure that graduates are equipped to face the challenges of a dynamic and complicated healthcare system (Bvumbwe, 2016; Ekstedt et al., 2019). In this study, participants' suggestions mostly related to education that had more emphasis on practice within the course, and that practice should first be done in the nursing skills lab (using simulators) which is very similar to the clinical environment. In addition, different and innovative training techniques should be used (that are rich in visual material, applied demonstrations, video, role play, virtual reality, mobile game based virtual reality, simulation of scenarios in the hospital, etc.); these findings were different from other studies (Table 1). The majority of respondents thought that there were many implementation skills taught in the education setting but not practiced in the clinical environment (S28), and these practices should be presented to them in a nursing skills lab (S34), which can simulate the practice environment and improve their practice skills (S43) (Table 2).

Technological developments significantly affect our lives, practice, education, and management (Fawaz et al., 2018; Kyaw et al., 2019; Raja & Nagasubramani, 2018). Educational technology is the employment of models of technology to ease the education process. This technology contains both using web-based education in both live classes and classes uploaded to the internet for later access by students. Examples of these technologies are electronic references, such as e-books, a multitude of internet-hosted material, computer access, smart boards, broadband internet services within the class and information technology rooms, videoconferencing, and so on. Instructors have an important role to include the appropriate and proper employment of technologies in education. The new generation that is currently in undergraduate education is very closely interested in technology (Fawaz et al., 2018; Raja & Nagasubramani, 2018). A large part of the students' expectations can be met by using technology. In the current study most of the participants stated that they agreed with the statements (S7, S26, S27) that the technological methods and different training techniques should be used in practice and theoretical education (Table 2). Their suggestions regarding hospitals were they should be more developed and have high standards. Below are some examples of statements from participants:

“Technology is changing very fast almost every year, but we are still training with the same old methods, while talking about artificial intelligence development today. Education is far behind technology. I think new technologies should be used in education” (No. 2, male, fourth-grade student, aged 23)

## Conclusions and Recommendations

In the current study, it was determined that nearly all the participants experienced challenges during clinical practice, which related to the nurses, hospital, and theoretical education, and half of them believed that their challenges could be partially resolved. Most of the participants could partially transfer what they learned in the lessons to the clinical practice. All the participants who reported an event that affected them in the clinic gave an example of a negative event, and most of these events were related to the attitudes and behaviors of the nurses. Their suggestions for better clinical practice were; practice lesson should be increased and first be done in the nursing skills lab, and innovative and technological training techniques (rich in visual material, applied demonstrations, virtual reality, mobile game based virtual reality, video, role play, simulation of scenarios in the hospital etc.) should be used parallel with the technological developments of the age.

It is suggested that clinic nurses and educators should be aware of the gap between theoretical and practical education and be supportive and collaborative in creating positive learning environments. Nurses and educators should cooperate to produce projects that will increase the quality of education and the use of different and new educational techniques in nursing education should be supported.

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