

The Effect of Scenario-Based Standardized Patient Simulation on Freshmen Nursing Students' First-Day Clinical Experience and Anxiety Levels

Senaryo Temelli Standart Hasta Simülasyonunun Hemşirelik Birinci Sınıf Öğrencilerinin İlk Gün Klinik Uygulama Deneyimlerine ve Anksiyete Düzeylerine Etkisi

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This study was presented as a verbal presentation at 15th Euro Nursing and Medicare Summit (17-19 October 2016, Rome, Italy).

ABSTRACT Objective: The aim of this study was to examine the effect of scenario-based standardized patient simulation (SPs) on first-day clinical practice and anxiety level of freshmen nursing students. **Material and Methods:** The sample of this semi-experimental study consisted of 29 experimental and 37 control group freshmen nursing students. Experimental group was given scenarios for meeting the patient during SP simulation application. Standard curriculum was applied to the control group. After completing theoretical and laboratory applications, they started clinical practice. Anxiety levels of the experimental group students were measured using "State-Trait Anxiety Inventory" before and after the simulation. The anxiety levels of both groups were re-measured with the same measuring tool prior to the encounter with the patient and at the end of the first-day of clinical practice. Students in both of the groups were asked to complete "Clinical Practice Evaluation Form" which consisted of three open-ended questions about the first-day experiences of their clinical practice. The findings of the study were evaluated with SPSS 23 package program and $p < 0.05$ was considered significant in all analyzes. Written and verbal informed consent was obtained from all students. **Results:** There was a significant difference between the anxiety levels of both experimental and control groups before (experimental: 49.00; control: 49.00) and after (experimental: 40.00; control: 40.50) clinical experiments and the scores were found to be moderate ($p < 0.05$). However, there was no significant difference ($p > 0.05$) when the pre-clinical and post-clinical scores of the groups were compared. Also, there was a significant difference between the anxiety levels of the experimental group students before and after the simulation (42.00) and after (31.00) ($p < 0.05$). The students on the experimental group stated that they were very excited during the debriefing stage after the SP experience and that they would try to be calm and confident in clinical practice. Before the first clinical experience, the experimental group students reported that they were mostly excited (44.8%), afraid (24.3%) and anxious (13.8%), while the control group students reported that they were mostly excited (60.4%) and afraid (10.4%). **Conclusion:** The first-day clinical practice anxiety of the students who had simulation experience with the SP and those who did not have this experience were moderate. Although there was no difference between the anxiety levels of groups pre and post simulation, there was a significant decrease in the anxiety levels of both groups of students before and after the first encounter with the patient. The students stated that SP experience is an effective learning method in preparing for the clinical practice process. In addition, the experimental group students reported that if they could perform repeated simulation applications, they would do much better in real practice.

Keywords: Nursing student; standardized patient; simulation; clinical experience; anxiety

ÖZET Amaç: Çalışmada senaryo temelli standart hasta simülasyonunun hemşirelik birinci sınıf öğrencilerinin ilk gün klinik uygulamalarına ve anksiyete düzeyine etkisini incelemek amaçlanmıştır. **Gereç ve Yöntemler:** Yarı deneysel tipdeki araştırmanın örneklemini 29 girişim, 37 kontrol grubu birinci sınıf hemşirelik öğrencisi oluşturmuştur. Girişim grubuna hastayla tanışma senaryolarını içeren standart hasta simülasyon uygulamaları yaptırılmıştır. Kontrol grubu öğrencilerine standart müfredat uygulanmış, teorik ve laboratuvar uygulamalarını tamamladıktan sonra klinik uygulamaya çıkmışlardır. Simülasyon öncesi ve sonrası girişim grubu öğrencilerin anksiyete düzeyleri "Durumluk Anksiyete Skalası" ile ölçülmüştür. Hem deney hem kontrol grubu öğrencilerinin klinik uygulamanın ilk günü hastayla karşılaşmadan önce ve günün sonunda anksiyete düzeyleri aynı ölçüm aracıyla yeniden ölçülmüştür. Her iki grup öğrencileri klinik uygulamanın ilk günü deneyimlerini içeren açık uçlu üç sorudan oluşan "Klinik Uygulama Değerlendirme Formu"nu doldurmuşlardır. Çalışmada elde edilen bulgular SPSS 23 paket programı ile değerlendirilmiş ve anlamlılık düzeyi $p < 0,05$ olarak kabul edilmiştir. Çalışmaya katılan tüm öğrencilerin yazılı ve sözlü onamları alınmıştır. **Bulgular:** Çalışmada hem deney hem de kontrol grubunun klinik uygulama öncesi (deney 49.00; kontrol: 49.00) ve sonrası (deney: 40.00; kontrol: 40.50) anksiyete puanlarının orta düzeyde ve her iki grubun klinik öncesi ve sonrası anksiyete puanları arasında anlamlı fark bulunduğu ($p < 0,05$), ancak grupların klinik öncesi ve sonrası puanlarının karşılaştırılması sonucunda anlamlı fark bulunmadığı ($p > 0,05$) belirlenmiştir. Deney grubu öğrencilerinin simülasyon öncesi (42.00) ve sonrası (31.00) anksiyete düzeylerinde anlamlı düzeyde farklılık olduğu görülmüştür ($p < 0,05$). Simülasyon deneyimi sonrası öğrenciler debriefing aşamasında çok heyecanlandıklarını, klinik uygulamada sakin ve özgüvenli olmaya çalışacaklarını belirtmişlerdir. İlk klinik deneyim öncesi deney grubu öğrencileri en fazla oranla heyecanlandıklarını (%44,8), çekindiklerini (%24,3) ve anksiyete yaşadıklarını (%13,8) bildirirken, kontrol grubu öğrencileri en fazla oranla heyecanlandıklarını (%60,4) ve korktuklarını (%10,4) bildirmişlerdir. **Sonuç:** Standart hasta ile simülasyon deneyimi yaşayan öğrenciler ile bu deneyimi yaşamayan öğrencilerin ilk günlük klinik uygulama anksiyeteleri orta düzeydedir. Grupların karşılaştırılmasında klinik öncesi ve sonrası anksiyete düzeyleri arasında farklılık olmamakla birlikte; her iki grup öğrencilerin hastayla ilk karşılaşma öncesi ve sonrası anksiyete düzeylerinde anlamlı düzeyde azalma olmuştur. Öğrenciler standart hasta deneyiminin klinik uygulama sürecine hazırlanmada etkili bir öğrenme yöntemi olduğunu belirtmişlerdir. Ayrıca deney grubu öğrenciler, tekrarlı simülasyon uygulaması yapabilseler gerçek uygulamada çok daha iyi olacaklarını da bildirmişlerdir.

Anahtar Kelimeler: Hemşirelik öğrencisi; standart hasta; simülasyon; klinik deneyim; anksiyete

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Peer review under responsibility of Türkiye Klinikleri Journal of Health Sciences.

Received: 05 Mar 2019

Received in revised form: 31 Aug 2020

Accepted: 11 Sep 2020

Available online: 17 Dec 2020

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As is the case for all curriculums for practice-based disciplines, nursing education must combine two integral parts: theoretical information and clinical experience.¹ Since nursing as a profession requires certain cognitive, psychomotor, and attitudinal behaviours, it is important to use innovative practices in nursing education. With the introduction and development of new learning tools, there has been increased interest in using computer-aided resources, simulation, and distance education techniques in nursing education.^{1,2} In particular, simulation has been adopted as a method to help patient care management students develop sufficiency and gain competence.^{3,4}

Information acquisition, innovation, skills, attitudes, developments in approaches to critical thinking and decision-making in patient care, and changes in education and technology have contributed to the spread of simulation tools and techniques.^{3,5} Various simulation methods and tools are used to ensure that students are prepared for clinical environments. These include models, training tools, computer-based programs, virtual reality, high-fidelity human patient simulators, and standardized patients (SPs).⁶ The simulation practice in nursing education enables the students to handle an incident as a real case and practice educational work on the case in the laboratory environment.^{7,8} Simulation methods are divided into three groups as low, medium and high reality according to the level of reality and difficulty. Body-separated models, basic plastic mannequins, virtual reality and tactile reality, realistic high-tech interactive patient simulators and standardized patient practice are among the methods used.⁹ The standardized patient practice that belongs to the high reality category is used to gain psychomotor skills to teach physical examination methods to improve students' communication skills, to increase students' self-confidence and to reduce anxiety.¹⁰⁻²⁰ The standardized patients, called "programmed patients" in the first applications then called "simulated patients", are individuals who are trained to describe disease-consistent behaviors.^{21,22} Standardized patient is an effective method in comprehending the skills that are difficult to implement such as the communication skills of the learners in particular by reflecting the real patient's emotional dimension in a realistic way.²³

The training in psychomotor skills laboratories is an essential teaching method that must be based upon the nursing profession as it prepares the students for the clinical environment prior to clinical practice and it must be constantly improved.²⁴ Though students have the chance to role-play with their peers in laboratory practice settings, they currently have few or no opportunities to interact with patients and improve their interpersonal and professional communication skills.¹⁰ Studies have shown that scenario-based SP simulations created to prepare students for clinical settings provide students with a valuable learning experience by offering them a practice arena for making clinical decisions, developing their communication skills, and practicing their critical thinking skills.^{10,14,17,23,25-27} Using SPs in nursing education gives students the opportunity to experience scenarios they may encounter when caring for real patients and thereby develop the skills they will need to manage communication difficulties.²⁸ Therefore, structuring the educational process well and ensuring that theory and practice are properly integrated is important for helping students develop their professional skills. SP practice training provides a safe environment for learning and reduces students' anxiety in a lowstress environment, allowing students to engage in skills training without jeopardizing patient safety.^{4,11,28-31}

Before they begin engaging in clinical practice and working with patients in a clinical setting, students who have enrolled in the Fundamentals of Nursing course often feel intense anxiety about damaging patients. Students often encounter difficulties in meeting patients for the first time, getting to know them, and communicating with their relatives. They are especially anxious about saying the wrong thing or encountering a question they cannot answer.³² This experience of anxiety prevents optimum learning and negatively affects students' performance.³³ However, studies in clinical settings have found that students who had engaged in SP practice demonstrated decreased anxiety levels.³⁴

Although the use of simulation in undergraduate education is gradually becoming widespread, studies demonstrating the effectiveness of simulation in nursing education are needed.^{10,11,30,35}

In Turkey, medical education incorporates SPs but the studies on the use of scenario-based SPs in nursing training are quite limited.^{2,11,36}

In this study, it was aimed to examine the effect of scenario-based standardized patient simulation on first-day clinical practice and anxiety level of nursing freshmen students.

It is an application that should be developed in the ability of students to start and continue communication on the first day of clinical practice, using standardized patient use in skill laboratories. Additionally, it is thought that it will help them realize their success and reduce their anxiety before they go to a real clinical setting. On the first clinical application day, it is estimated that they will be self-confident in initiating communication with the patient and can communicate with the patient more comfortably in accordance with their gains in standardized patient application experience. Thus, it is thought that it will contribute to the quality of the care given to the patient by facilitating the adaptation and orientation of the student to the clinical environment. In addition, it is expected that this method, which is used in nursing education at the international level, will be used in our country and will contribute to the literature.

MATERIAL AND METHODS

STUDY DESIGN

This is a semi-experimental study conducted to examine the effect of scenario based standard patient simulation on first day clinical practice and anxiety levels of first year nursing students.

SETTING AND PARTICIPANTS

The semi-experimental study was conducted with students of nursing department of a public university in the province of Antalya that took The Fundamentals of Nursing (i.e., a freshman course) class in May 2016.

The Fundamentals of Nursing course for the freshmen nursing students was carried out by two sections as A and B due to the high number of students. The number of students in each section is approximately 110. The curriculum encompasses 60 hours of theoretical lecture, 60 hours in the labora-

tory, and 120 hours of clinical practice. After the theoretical lecture is taught, laboratory practices are led by instructors by dividing students into groups of 12-13 people. Then, the students maintain these cohorts and continue to clinical practice in different university hospital clinics.

In order for experimental and control groups not to be influenced by each other, the students of the control group were selected from the Section-A (n=37) and the students of the experimental group were selected from Section-B (n=35). Since six students selected for the experimental group stated that they did not want to participate in the study, the study was conducted with 29 students. To conform to probability sampling procedures, the method of drawing lots was used to select the experimental and control groups.

DATA COLLECTION TOOLS

Data collection tools “State Anxiety Inventory (STAI)” for assessing the students’ anxiety levels, and “Clinical Practice Evaluation Form” for evaluating the students’ opinions about the first clinical practice were used as data collection form.

The State-Trait Anxiety Inventory (STAI): The State-Trait Anxiety Inventory (STAI) was used for assessing the students’ anxiety levels. Spielberger, Gorsuch, and Lushene’s (1970) STAI consists of two 20-item sub-scales that evaluate state anxiety and trait anxiety. The State Anxiety Sub-Scale (STAI-S) was designed to evaluate a person’s feelings in specific situations and during certain times, whereas the Trait Anxiety Sub-Scale (STAI-T) investigates the person’s general emotional structure.

In Turkey, Oner and Le Compte (1983) performed adaptation, validity, and confidence tests for the STAI. The article’s reliability correlation levels, which were found to be 0.34-0.72 for the STAI-T and 0.42-0.85 for the STAI-S, indicate good credibility of the articles translated into Turkish. The test-retest reliability levels of the inventory items, which were regarded as sufficient, were found to be between 0.71-0.86 for the STAI-T and 0.26-0.68 for the STAI-S. The Cronbach’s α internal consistency ratios of the inventory items for the current sample were determined to be 0.96 and 0.90 for the STAI-S and the STAI-T, respectively.³⁷

The State Anxiety Sub-Scale (STAI-S) was designed to evaluate a person's feelings in specific situations and during certain times. The STAI-S articles measure feelings and behaviors according to the severity on a four-point likert scale. According to the scale of anxiety state criteria scores of 0 to 40 from the inventory indicate no anxiety, scores of 41 to 60 mild anxiety, and scores >61 severe anxiety. In our study, the State Anxiety Scale was used. The STAI-S was administered before and after the simulation experience and the initial clinical experience.

The Clinical Practice Evaluation Form: The form was prepared by the researchers in order to assess participants' views about clinical practice. There were three open-ended questions in the form which evaluate the feelings of students about the first encounter with a real patient, their assessment of themselves for their performances throughout the day and their comments about their best applications.

- Questions on the form,

- How did you feel during your first meeting with the patient?

- What do you think you are doing well today? What could you do better?

- Was there any difference between your laboratory practices and your communication (self-introduction, explanation, information, etc.) during the actual clinical practice? How do you evaluate?

PROCEDURE

The study was implemented in two stages: the preparation stage and the realization stage. A flow diagram outlining the key events during the study is presented in [Figure 1](#). These phases and data collection forms used are described below.

During the Preparation Stage

Developing clinical scenario

On the first day of clinical practice, students should be able to introduce themselves to the patient, initiate and maintain communication, and evaluate the patients' vital signs. The scenario was prepared in accordance with these objectives. The patients' gender, age, diagnosis and past medical history were included

in the scenario. According to the scenario, students were asked to interact with a patient with a left-arm bone fracture due to a traffic accident and monitor the patient vital signs. Developing the simulation required synthesizing the patient information and necessary psychomotor information, defining learning objectives, and determining the activities that students must complete prior to attempting the simulation. The goal was for students to maintain their nursing roles and communicate with the patient using therapeutic communication techniques.

Recruiting and training SPs

Educational support was obtained from the Department of Medical Education for the duration of the SP training period. Standardized patients are healthy females, where one is 23 and the other is 30 years old. Support included four hours of theory and four hours of hands-on training that described the purpose, method, and role of the simulation, in addition to reviewing nurse-patient communication, SP acting techniques, tips for providing feedback to the student nurses, and our expectations of the students. Standardized patients were given 2 hours of scenario training by the researcher 2 days prior to the simulation. The standardized patients were informed about the study and their consent was obtained.

Identifying and informing students groups

The students were assigned to control and experimental groups by using the simple random number table. The researchers informed the experimental and control group's students of the content of the study after which each student gave their verbal and written consent. Scenario forms prepared by the researchers were distributed to the experimental group students two days before the simulation implementation. Scenario timeline, patient information, psychomotor information necessary for the simulation application, learning objectives of the simulation application, activities the students must do before the simulation application, debriefing questions were prepared for the students. All important information regarding the form was given to the students. The experimental groups, each of which contained six students, were formed. The students were informed of the simulation date and time.

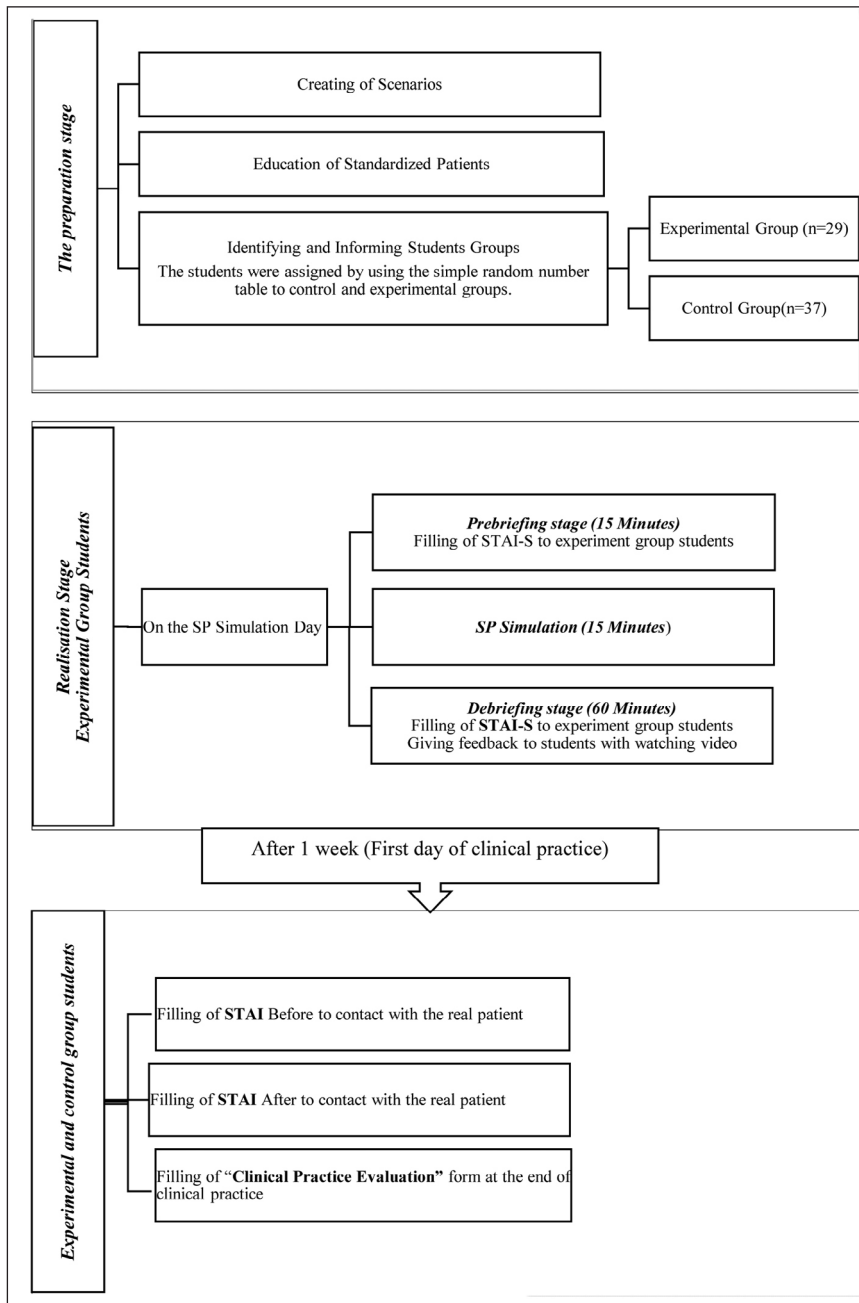


FIGURE 1: Study Flow Diagram. STAI-S: State Anxiety Scale, SP: Standard Patient.

Realization Stage

On the SP simulation day

The students and the SPs were taken to individual rooms. The third researcher prepared the SPs in accordance with the scenario. The first researcher explained to students about the simulation. The students had completed the STAI-S to evaluate their anxiety levels before the simulation implementation.

The session lasted for a total of 15 minutes. During the session, with permission from the students and SPs, the second researcher recorded a video of the simulation. The video recorded was shown to the students after the simulation, and the SPs provided the students with feedback at the beginning of the debriefing session (45-60 minutes). The students were encouraged to express their feelings about the simulation experience.

■ At this stage, the students were asked the following questions;

■ How did you feel during the simulation?

■ What did you do well?

■ If you had the opportunity to do this simulation again, what would you do differently?

■ What will you transfer from this simulation to the clinic?

■ All the researchers conducted the debriefing stage for all the experimental groups. After the simulation, the students were asked to complete the STAI-S.

Initial clinical experience

The students' clinical practice began one week after the simulation experience.

The morning of the clinical day, both the experimental and control group students gathered in the clinical meeting room. They were asked to complete the STAI-S to evaluate their anxiety levels before initiating communication with a real patient. Later, they met with the patients determined by the instructor. They performed communication, took vital signs and recognized the clinical environment. At the end of the day, the students came together in the meeting room. They completed the STAI-S and "The Clinical Practice Evaluation Form" under the supervision of the instructor.

STATISTICAL ANALYSIS

In this study, SPSS 23.0 Statistics Package Software was used to evaluate the data and analyze frequencies. Descriptive data were presented as either the median or minimum and maximum. Nonparametric tests were performed since the data did not show normal distribution. The Mann-Whitney U Test was applied to two independent samples to compare the average anxiety scores of the experimental and control groups prior to contact with a real patient and posterior to making acquaintance and communicating with a real patient. Two related samples (Wilcoxon) test was applied to dependent sample to compare the average anxiety scores of the experimental groups before and after simulation and prior to contact with a real patient and posterior to making acquaintance and communicating

with a real patient. The results were assessed at a 95% confidence interval with a significance level of $p < 0.05$.

The Clinical Practice Evaluation Form which consisted of three open-ended questions that include the first-day experiences of clinical practice. The answers from this form were read by all researchers separately. The answers given to each question are grouped and their frequencies are taken.

The experimental group students' opinions about the simulation expressed during the debriefing stage were grouped and read by all the researchers after analyzing the videotape. Student opinions are presented using frequency measures.

ETHICAL CONSIDERATIONS

The study was conducted in accordance with the Declaration of Helsinki. Ethics committee approval was obtained from a public university in the province of Antalya Clinical Research Ethics Committee (decision no: 18/05/2016/296). Written and verbal informed consent was obtained from all students.

RESULTS

Majority of the participants (94.8%) were women where as 5.2% were men. Participants were 19 or 20 years old.

The similarity/homogeneity of both groups with respect to the variables related with their age and gender has been analysed with "quantity, % and Chi square (χ^2) test" and $p > 0.05$ value has been assumed as the criterion data. A statistically significant difference could not be detected between the students of experimental and control groups with regard to their age and gender. The groups are homogeneous ($p > 0.05$).

STUDENTS' ANXIETY SCORES AFTER SP SIMULATION AND BEFORE AND AFTER THE FIRST CLINICAL DAY

There was a statistically significant difference ($p < 0.05$) between the average anxiety score of the experimental group students before the standardized patient simulation (42.00, min.28-max.62) and after the simulation (31.00, min.22-max.56) (Table 1).

Anxiety scores were found to be 49.00 and moderate in the first clinical day before contacting the real

TABLE 1: Comparison of anxiety levels of students in experimental group before and after SP simulation and clinical experience (n=29).

	Anxiety levels of experimental group students			Statistical analysis	
	Test	Median	(min.-max.)	Z	*p-value
SP simulation	Before	42.00	28-62	-2.585	0.010
	After	31.00	22-56		
Clinical experience	Before	49.00	26-65	-2.860	0.004
	After	40.00	23-62		

*p<0.05, Z: 2 Related samples (Wilcoxon) Test.

TABLE 2: Comparison of anxiety levels of students in experimental group and control group before and after clinical experience.

	Anxiety levels of students				Statistical analysis	
	Experimental group (n=29)		Control group (n=37)		MWU	p-value
	Median	(min.-max.)	Median	(min.-max.)		
Before clinical experience	49.00	26-65	49.00	29-60	-0.051	0.960
After clinical experience	40.00	23-62	40.50	23-61	-0.253	0.800
Z	-2.860		-3.934			
*p-value	0.004		<0.001			

*p<0.05, MWU= Mann Whitney U Test, Z: 2 Related samples (Wilcoxon) Test.

patient for both groups (Table 2). There was a statistically significant difference between the average anxiety scores after contacting and communicating with a real patient of experimental group students (40.00, min.23-max.62) and control group students (40.50, min.23-max.61). A statistically significant difference could not be detected between the average anxiety scores of the students in the experimental and control groups before and after contact with a real patient (Table 2).

OPINIONS/EVALUATIONS OF STUDENTS ABOUT THE SIMULATION

The distribution of the experimental group students' answers to the questions in the debriefing stage of the standard patient simulation is given in Table 3. In the debriefing phase, the students were asked how they felt during the simulation. Students gave more than one opinion/response to the questions.

Most of the students stated that they were very excited during the implementation of SPs (75.8%) and some of them did not know what to do (24.2%). When asked what they did best during simulation, some students stated that they informed their patients

TABLE 3: Distribution of the experimental group students' answers to the questions in the debriefing stage of the standard patient simulation.

	Experimental Group (n=29)	
	f	%
How did you feel during the simulation*		
I was excited	22	75.8
I didn't know what to do	10	24.2
What did you do well*		
Informing the patient	6	19.3
Introduce myself	9	29.1
initiated communication with the patient	8	25.8
evaluated vital signs correctly	8	25.8
If you had the opportunity to do this simulation again, what would you do differently*		
Control their excitement	27	33.3
Communicate better with the patient	26	32.1
Evaluate vital signs more accurately	28	34.6
What will you transfer from this simulation to the clinic*		
Taking care of communication with the patient	21	43.7
Being calm and more confident	18	37.5
Review theoretical knowledge	9	18.8

* Students gave more than one answer

the best (19.3%), some introduced themselves well (29.1%), some initiated communication with the pa-

tient (25.8%), and some evaluated vital signs correctly (25.8%). Almost all of the students stated that if they had the opportunity to do this simulation again, they would like to control their excitement, communicate better with the patient, and evaluate vital signs more accurately.

When students were asked what they would transfer from the simulation experience to the clinic; 43.7% stated that they would be careful with patient communication, 37.5% stated they would be calm and confident, and 18.8% stated they would review their knowledge before starting clinical practice. Students also stated that the application of SP is realistic and that they had a valuable experience before going into clinical practice.

The students in the experimental group stated at the debriefing stage that they could not envision the application environment completely at the beginning and they are rather excited due to the new application. However, they expressed that the simulation application was quite beneficial in order to prepare them for the clinical environment and that they noticed their shortcomings and realized the necessary behaviors for the first day of clinical application. Besides that, the students stated that they felt more relaxed with SPs, but they would feel anxiety with real patients, nonetheless.

“it was like a real patient, ok, but we know that it was not. We do not know the patients, ok, but...”

The students stated at the debriefing stage that they were quite anxious at the beginning of SP experience. They expressed that the most important reasons for this situation were the insufficiency of their knowledge, being unfamiliar with do's and don'ts and being unable to estimate the methods of professional communication.

The students verbalized that they would try to form a more effective communication and stay calm when they were asked what would transfer from this application to the clinical experience. Additionally, the students expressed that they realized their need for reviewing their fund of knowledge.

“I too realized that I should do a general review of my knowledge before going to the clinic. Because

my anxiety is possibly due to lack of knowledge is high. I mean I am a self-confident person generally, but I will be anxious if I lack the knowledge and the patient will feel my anxiety.”

EVALUATIONS OF STUDENTS REGARDING THE FIRST DAY CLINICAL PRACTICE

Table 3 shows the opinions of both the experimental and control groups regarding the first day of clinical practice.

The emotion reported the most by the students in both groups was excitement. While the experimental group students reported their best practice as the way they initiate contact with the patient (66.6%), control group students reported it as the measurement of vital signs (53.5%).

When asked, “What could you do better on the first day?”, experimental group students (37.9%) stated evaluating the vital signs, more than half of the control group students (51.4%) stated communicating better with the patient. The students in both groups stated that they had difficulty in measuring the blood pressure of the patients (Table 4).

Students from both groups stated that there is a difference between clinical practice and laboratory practices. They stated that they were excited at first since they were dealing with real patients, but they could communicate better afterwards.

Experimental group students are coded as ES, and control group students are coded as CS.

When the opinions of experimental group students about the clinical evaluations were examined, the students stated that they were excited, timid, and anxious before meeting with the patients.

“Since I do not know the patient, I was a bit excited and timid.” (ES-1)

“I did not know how to behave”. (ES-3)

“I'm a little timid. I tried to be cheerful. At the same time, I was anxious and afraid “. (ES-6)

“I was nervous, worried. I was afraid of the patient's reaction.” (ES-8)

“My first interview with the patient was so easy until I saw the incision and edema in the left arm.” (ES-12)

TABLE 4: Distribution of experimental and control group students' views on clinical practice on the first day.

	Experimental (n=29)		Control (n=37)	
	f	%	f	%
Feelings*				
Excited	13	44.8	29	60.4
Timid	7	24.2	2	4.2
Fear	3	10.3	5	10.4
Anxious	4	13.8	4	8.3
Comfortable / quiet	2	6.9	8	16.7
Best practice*				
Communication with the patient	22	66.6	17	39.5
Measurement of vital signs	9	27.3	23	53.5
Observation	2	6.1	3	7.0
What could be done better				
Communication with the patient	5	17.3	19	51.4
Measurement of vital signs ***	11	37.9	16	43.2
Patient nursing care	5	17.3	-	0.0
I could have come more prepared (in terms of information)	8	27.5	2	5.4
Difference between laboratory and clinical practice				
There is a difference**	19	65.5	36	97.3
No difference	10	34.5	1	2.7

* Students gave more than one answer

** Interference group students who said no difference stated the difference between simulation application and clinical application. One of the control group students stated that they were similar.

***Students stated that they had difficulty in measuring blood pressure from vital signs.

In the feedbacks taken from the students at the end of the first day of clinical practice, almost all of the students stated that they did not have any difficulty in communicating with the patient and the best thing they did on that day was the communication with the patient.

“At first I was anxious. But afterward, my anxiety decreased, and I was relieved while establishing better communication, my worry decreased “. (ES-11)

“I got a little excited but approached more securely. And I could practice what I thought.” (ES-15)

“It was not what I had ever expected. I thought that communication with the patient would not be good, but it was good “. (ES-18)

When the students were asked to evaluate the laboratory environment and the real clinical environment, they stated that the clinical environment was more different, and they had a feeling of tightness and get excited because they are real patients.

“It’s more difficult to provide care for a real patient.” (ES-6)

“Of course it was different since it was the real patient’s wishes.” (ES-12)

“The only difference was my feelings. I am not worried about laboratory practices.” (ES-19)

“Since the patient was a real patient, I had more responsibilities. Now everything was more serious “. (ES-20)

“Actually, it was technically absent. Because the steps of the process were right, but we were excited since everything was real for us.” (ES-22)

“Yes, there was. As a result, I feel anxious when I am practicing with real patients there. Because a mistake may not have a return”. (ES-29)

When control group students’ expressions about the clinical assessments were evaluated, it was detected that anxiety levels of students were high at first but later decreased. Students expressed relaxed feelings in ac-

cordance with the attitudes of patients. The statements below set as examples:

“I entered the room excitedly. Later, the patient being cheerful and talkative, made me relaxed.” (CS-24)

“Before entering the room, normally I was a little excited and scared at the beginning. But later, good-humoured characteristics and warm behaviour of the patient relaxed my excitement and fear.” (CS-29)

“I got excited. I could not express myself after introducing myself. Because I thought that the patient may feel hurt or get angry against my questions. Actually, patients acted more professionally than us and calmed us.” (CS-38)

“Excited. I could not communicate with my first patient, but I felt relaxed when I communicated with my second patient and the attendant.” (CS-35)

DISCUSSION

Students may experience anxiety during their clinical experience. This anxiety may adversely affect students' clinical learning processes and patient care.

In our study, the students in the experimental group experienced moderate anxiety before the SP simulation and there was a significant decrease in their anxiety levels after the simulation. However, one week later, the anxiety level of the students increased before the first day of the clinical application.

It can be concluded that the first experience of practicing with an SP causes anxiety for the students at the beginning. Hollenbach (2016) showed that students' simulation experience in the laboratory had a general effect on reducing anxiety which did not persist before clinical practice.³⁸ Study results showed that students had higher than normal anxiety levels before simulation activities and clinical experiences. The authors think that students may have experienced high levels of anxiety with or without simulation during their initial experiences, as they were not familiar with the clinical setting.³⁹ Other studies about the effect of the simulation method on students' anxiety levels indicated similar findings.³⁹⁻⁴¹ Kameg et al. found that students' anxiety levels after practice with SPs decreased significantly compared to the before

simulation anxiety levels, a finding with which our results align.²⁰ It is a known fact that every unknown practice leads to anxiety and fear for the students. Clinical practice, first laboratory practice, and other first practices can be shown as examples for this. In their quasi-experimental study conducted with standardized patients before the clinical practice for the psychiatry course, Kameg et al. stated that there was a statistically significant difference between the anxiety levels before and after the experience of the students with SPs. There are also studies in the literature indicating that there is a significant difference in anxiety and stress for every practice (laboratory and clinical practice) where the students will perform.^{42,43}

During the debriefing phase, the students in the experimental group stated that they were quite excited at the beginning of the practice since they couldn't estimate what kind of environment they will encounter, and it was a new practice. However, they expressed that the practice was very useful for preparing themselves for the clinical environment and they recognized their deficiencies and what they need to do on the first day of the clinical practice. Although the simulation application creates anxiety and stress in the students, it is a helpful educational method for being aware of the information requirements, learning communication skills and learning critical thinking.⁴⁴⁻⁴⁶ It can be said that students are concerned about what to say to patients in clinical practice and this is related to lack of knowledge and experience.

In our study, it was also detected that the groups had considerably similar levels of anxiety prior to contact with the real patient. Anxiety at a mild and moderate level is instructional and also increases attention. Therefore, it is an expected situation for students to experience anxiety and concern before clinical practice. Even if the students practice repeatedly in the skills lab, they do not know what to do when they encounter the real patient in the clinical setting and therefore experience anxiety. Our study's findings contrast with those of Gore et al., who found that students who perform simulations before clinical practice have lower anxiety levels on their first day of clinical practice.³⁹ However, the similarity and

the lack of statistical significance between the students' anxiety levels may be explained by the fact that the students had only one experience with SP practice. This may be why the control group students' anxiety levels and emotions on the first clinical day may be the same. For example, Sarmasoglu et al. found that the ratio of the students who feel comfortable was considerably low among students who had practiced with SPs only once, but that the ratio among students who practiced with SPs a second time demonstrated a higher level of comfort.¹¹ Webster (2014) examined the effect of SP practice on students' therapeutic communication skills and found that students have high anxiety levels upon their first interaction with the SP. In the same study, the students expressed that their anxiety levels decreased upon interaction with the second SP and that they felt more comfortable.⁴⁷

The anxiety levels of the students in the experimental group after the clinical experience was found to be slightly lower than that of the control group. Kameg et al. stated that the students experienced anxiety especially in clinical practice for providing certain competencies and in every clinical rotation even if they get accustomed to the clinical environment.²⁹ In the study conducted by Sharif and Masoumi (2005) about clinical experience, researchers stated that the students were stressed on the first day they meet with the patient.¹

When the students' opinions about real clinical settings were evaluated; the students stated that the clinical setting was different, they felt tension because the patient was real, they were afraid to make mistakes and they felt more responsible with the real patient. In a qualitative study investigating the students' opinions about the clinical learning environment, Sercekus and Baskale (2016) emphasized that the students experienced fear of being rejected by the patients. In the same study, a student stated his/her first day concern saying, "It was my first-day at the clinic. One patient told me that I was a student and he/she would not have me do anything and I thought that I cannot continue this profession so I should enter the exam and change my school".⁴⁸ In the study conducted by Pulido-Martos et al. to investigate the nursing students' stressors, they reported that one of the

most important stressors is fear of the unknown and the fear of error.⁴⁹ In their qualitative study, Bremner et al. reported that even though the laboratory practice seemed to reduce a student's anxiety, the student still experienced anxiety on the first day of the clinical practice since the patient was real.⁵⁰ In the feedback collected from experimental group students at the end of their first day of clinical application, nearly all the students reported that they did not encounter difficulties in communicating with patients and that the best assignment they completed that day was related to patient communication. The reason students stated that they had difficulties in evaluating vital signs was that they were first year students at the beginning of their nursing education experiencing first days in the field of clinical practice.

Nursing first year students had the opportunity to use their skills to initiate communication with standard patient simulation in skill laboratories before clinical practice. Although simulation is a new application for students, it causes them to experience anxiety, but it has helped them communicate with the patient in the clinical setting. Anxiety levels were found to be moderate before the students contacted their patients on the first day of clinical practice. There was a significant decrease in anxiety levels of students after initiating communication with the patient. Nurse educators need to be aware of the high level of anxiety in nursing students and incorporate educational strategies to reduce student anxiety. While integrating these strategies into the education program, repetitive simulation experiences that will reinforce students' clinical skills in environments similar to real clinical settings should be planned.

LIMITATIONS

There are limitations in this study which should be considered during interpretation of the results. For one, small sample size limits the results' validity. Also, in terms of the students' interaction with the SP, there may be a lack of standardization as standard patients have to respond based on students' communication skills. This situation was taken into account when giving feedback to students during the debriefing phase.

CONCLUSION

In this study, the standardized patient simulation practice of the experimental group students resulted in lower anxiety level. As a result, it can be said that SPs increase students' awareness of information needs, and it is a positive experience that contributes to the clinical compliance process.

The results showed that students had more moderate anxiety before the simulation practice and before the first clinical experience. The students' clinical learning environment may have lead the students to experience stress due to the fear of being rejected by the patients or making errors. Both the SPs and the clinical learning environment may have caused students to experience anxiety because of this being their first experience. Therefore, it is thought that repeated simulation practices integrated into nursing education will be effective in managing students' anxiety.

Considering the opinions of the students about SP experiences, it was seen that the standard patient experience increased the awareness of the student about the information needs and learning motivation. In addition, it can be said that SP applications can be

used in academic environments as an effective learning methodology. Nurse educators should continue to explore various opportunities with the implementation and evaluation of SPs on first day clinical practice student anxiety within the nursing freshmen students'

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: Serpil İnce, Fatma Dursun Ergezen; **Design:** Serpil İnce, Fatma Dursun Ergezen, Emine Kol; **Control/Supervision:** Serpil İnce; **Data Collection and/or Processing:** Serpil İnce, Fatma Dursun Ergezen, Emine Kol; **Analysis and/or Interpretation:** Serpil İnce; **Literature Review:** Serpil İnce, Fatma Dursun Ergezen; **Writing the Article:** Serpil İnce, Fatma Dursun Ergezen; **Critical Review:** Serpil İnce, Emine Kol.

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