

## The Impact of Creative Drama on Nursing Students' Knowledge of Nursing Processes and Case Analysis Skills

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Geliş Tarihi / Received: 02.08.2022  
Kabul Tarihi / Accepted: 14.09.2022

Araştırma Makalesi/Research Article  
DOI: 10.5281/zenodo.7130655

### ABSTRACT

The aim of the study is to determine the impact of creative drama on the nursing students' knowledge of nursing processes and case analysis skills. This quasi-experimental study was carried out with 59 first-year nursing students between May 02 and June 30, 2021. The students were divided into experimental (n=30) and control groups (n=29) according to their grade point averages, with all students simultaneously receiving online theoretical information on nursing processes from the same lecturer. The case analysis study was conducted with creative drama in the experimental group, and with the conventional lecture and discussion method in the control group. The data were collected with descriptive characteristics form, The Nursing Process Knowledge Form, Patient Diagnosis Form, The Nursing Process Form, Case Evaluation Form and Feedback Form. The nursing process knowledge mean score and case analysis mean score ( $16.20 \pm 2.51$  and  $22.73 \pm 9.07$ , respectively) of the students in the experimental group were found to be statistically significantly higher compared to the students in the control group ( $15.27 \pm 3.28$  and  $15.14 \pm 9.28$ , respectively). A high level of positive statistical correlation was found between the nursing process knowledge mean scores and case analysis mean scores of the students ( $r = 0.986$ ,  $p = 0.000$ ). All students in the experimental group referred to the creative drama and case analysis process as helpful in communication (n=12), fun (n=11), useful (n=8) and memorable (n=10). Creative drama was observed to be effective in the nursing process knowledge and case analysis skills of nursing students.

**Keywords:** Case analysis, creative drama, nursing process, nursing students.

### INTRODUCTION

For a planned and systematic nursing course, the provision of health care to patients should be ensured with a proper nursing approach (Basit & Korkmaz, 2021). The nursing process is a systematic, problem-solving method consisting of five steps: data collection, diagnosis, planning, implementation, and evaluation. These are used to identify, prevent and treat existing or potential health problems plus support overall well-being (Aseratie, Murugan, & Molla, 2014). Providing care via the nursing process approach guarantees quality, individual and holistic care (Basit & Korkmaz, 2021). It is therefore necessary to instill the essence of the nursing process properly and thoroughly. Theoretical and practical teaching of the nursing process is provided to students throughout their nursing education. However, studies have suggested that nursing students' levels of knowledge of the nursing process varies and that different teaching methods should be employed (Taskin Yilmaz *et al.*, 2015; Ozdemir *et al.*, 2016; Yilmaz *et al.*, 2019; Kokturk Dalcalı, 2021). Teaching the nursing process is often reinforced with case analysis studies after theoretical work is completed. In available literature, there are limited studies on how the nursing process is taught, and in these studies, role-playing, concept mapping, simulations and web-supported learning methods are all used in nursing process education. Upon evaluation of these available studies, it was noted that all alternative teaching methods are effective in the teaching of the nursing process (Zare & Kargar Jahromi, 2017; Uslu & Van Giersbergen, 2019; Basit, 2020; Chang *et al.*, 2021).

Nursing education involves a learning process that covers cognitive, affective and psychomotor learning areas, and so, it is important for students to undergo training programs that enable them to participate in the learning process through interactive learning methods (Korhan *et al.*, 2018). One of these is the creative drama, which enables individuals to take on various roles, understand and see how others behave when facing of serious events, and use language and communication effectively (Molu *et al.*, 2019). In nursing education, creative drama can be used for experiential learning, which is an integrative process connecting knowledge and skills from many different sources (Arteklev *et al.*, 2018). In nursing education, the use of creative drama deepens the understanding of patients' experiences (Jacob & Van Jaarsveldt, 2016; Walker & Wilson, 2018), provides a better understanding of the professional identity of nurses, improves communication skills (Lund'en *et al.*, 2017; Neilson & Reeves, 2019), and critical thinking as well (Jacob & Van Jaarsveldt, 2016). Neilson and Reeves (2019) determined that an educational drama intervention performed with first-year nursing students had positive effects on the communication skills of students in end-of-life care. However, no study has been located analyzing the effect of creative drama in the teaching of the nursing process. Therefore, this study was undertaken to determine the impact of creative drama on nursing students' knowledge of the nursing process and case analysis skills.

## **MATERIALS and METHODS**

### **Study Design**

A pretest–posttest design was used with a nonrandomized control group.

### **Participants**

The population for this study consisted of nursing students at the Faculty of Health Sciences at a university during the 2020–2021 school year. Since the research is concerned with only the teaching of the nursing process and the theory is given in the first year, only first-year nursing students were included in the study (N=61). Research was carried out online with first-year nursing students who met the inclusion criteria (N=59).

Inclusion criteria of the research are as follows:

- ✓ Voluntary participation
- ✓ No prior creative drama education
- ✓ Availability for online participation in the case analysis with creative drama during the specified hours
- ✓ Participation in the case analysis with creative drama performance online through video conference

Exclusion criteria for the research are as follows:

- ✓ Not participating online in the case analysis with creative drama
- ✓ Not responding to data collection forms within the specified time

Nursing students were divided into two groups, experimental and control groups, according to their grade point averages. After students were ranked from highest to lowest GPA, they were assigned to the experimental group (n=29) and then to the control group (n=30).

### **Instruments**

Data were collected with a Descriptive Characteristics form, the Nursing Process Knowledge form, a Patient Diagnosis form, the Nursing Process form, Case Evaluation form, and Creative Drama feedback form.

Descriptive characteristics form includes five questions about students' age, gender, grade point average, school of graduation and family structure. Nursing process knowledge form was prepared

by researchers and consists of 20 multiple-choice questions designed to measure students' level of knowledge of the steps of the nursing process. Each correct answer to questions is scored 5 points, with a maximum score of 100 points. The form was sent to students online after their theoretical course on the nursing process and case analysis studies. Participants were asked to complete the form within 20 minutes.

Patient diagnosis form created according to the nursing model based on the Activities of Living prepared by Nancy Roper, Winifred W. Logan, and Alison J. Tirney was used. According to the model, the patient diagnosis form consists of 12 basic activities of living: maintenance of a safe environment, communication, breathing, eating and drinking, excretion, personal hygiene and clothing, maintenance of body temperature, movement, work and entertainment, expression of sexuality, sleep and death (Bulut & Güler Demir, 2017). The form was completed by researchers according to determined cases and directed to the students. The Patient Diagnosis form was used in the theoretical part of the course and in the case analysis exam.

Nursing process form covers the steps of the nursing process: nursing diagnosis (related factors, target), planning, and implementation and evaluation. The students were asked to create a nursing process according to the case in their patient diagnosis form. The nursing process form was used in the theoretical part of the course and in the case analysis exam.

Case evaluation form was specially prepared for each case given by researchers and used to evaluate the nursing process form. In the case evaluation form, each correct statement in the process form was scored "1" point and any incorrect or missing statement scored "0". According to the given case, a student can score a maximum of 50 points. The score on the case evaluation form generated the student's case analysis skill score.

Creative drama feedback form has an open-ended question, "Please indicate your thoughts on the use of creative drama in case analysis", was asked to students in the experimental group.

### **Application of Research**

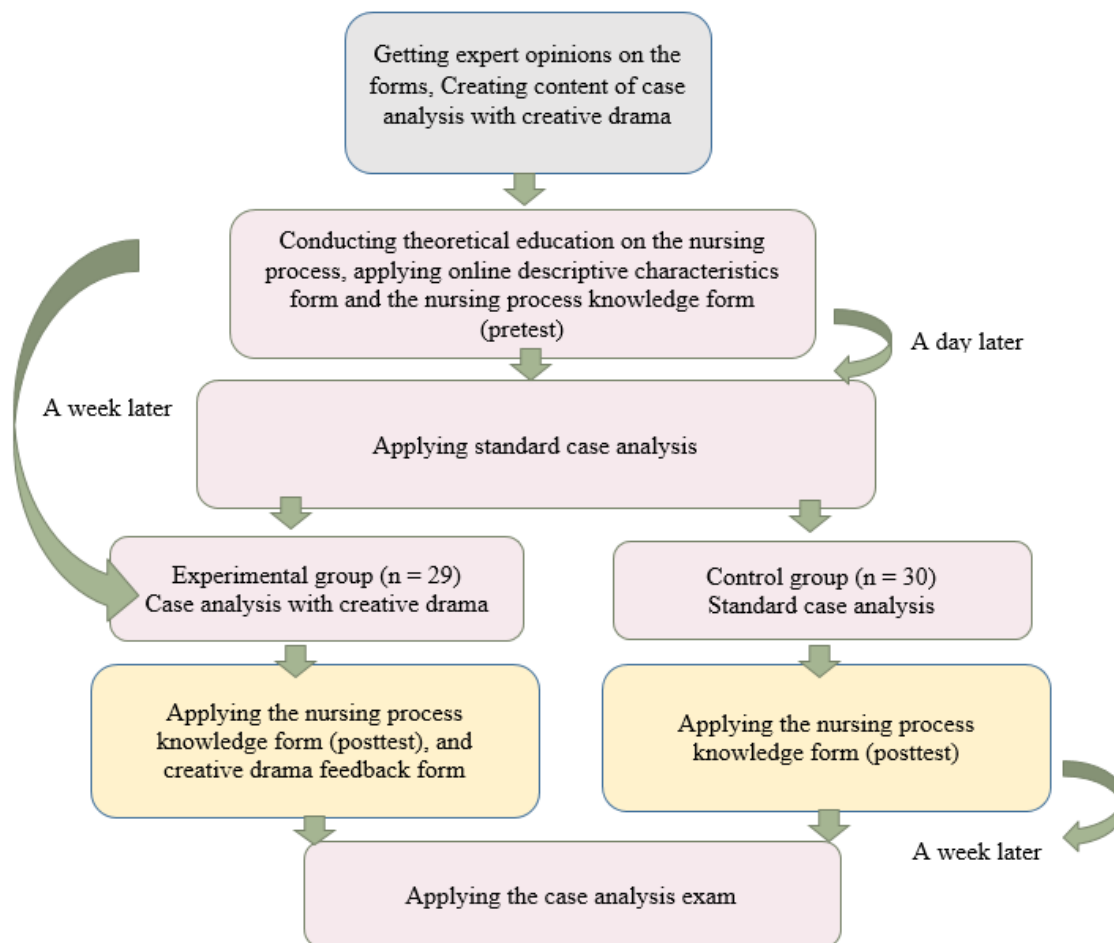
Research was conducted online between May 02, 2021 and June 30, 2021 in 3 stages, as distance education continued due to the pandemic. In the first stage, expert opinions on the patient identification form, which includes information about a case, the nursing process form which was prepared for the case and the case evaluation form were taken and all data were finalized. Furthermore, at this stage, the creative drama content was created with a creative drama trainer and researchers. In the second stage, students were informed about the study and theoretical education on the nursing process was provided under the systematic approach of the nursing principles course. In this training, information about the nursing process, the use of the nursing diagnosis book and the patient diagnosis form were explained to students synchronously (4 hours) by the researcher. On the same day, the students were informed about the research. The online descriptive characteristics form and the nursing process knowledge form (pretest) were then sent to those who agreed to participate in the research.

The next day during the course, the same researcher performed a standard case study with all the students. One week after theoretical education, on the day of the theoretical course, the students were divided into two groups, experimental and control groups, and a standard case analysis was performed with the control group in order to prevent the students from being influenced by each other. A case analysis study was also conducted with students in the experimental group with the help of an expert in creative drama and the same researcher via Zoom (3 course hours). In creative drama, the first stage is a warm-up process where the descriptive characteristics of the case were told to students via games. In the second stage, animation, groups were formed and individuals were asked to play roles regarding each basic need of the case. After animation, they were asked to determine appropriate nursing diagnoses and interventions. In the last stage, the evaluation stage, students were asked to evaluate the case analysis process with creative drama and express their opinions. The nursing process knowledge form was then completed by students in both the experimental and control groups,

immediately after the case analysis with the experimental group was terminated on the same day (posttest). Students in the experimental group were asked to complete the creative drama feedback form.

In the third stage of the research, all students took a synchronous case analysis exam one week after the case analysis. In the exam, the patient diagnosis form prepared by researchers was sent to the students. Accordingly, the students were asked to fill-in the process forms online and upload them to the student information system. The case analysis exam took one and a half hours and students were asked to keep their cameras on throughout.

In order to prevent application differences between the groups, a recording of the creative drama activity carried out in the experimental group was uploaded to the school's system after completion of the data collection process and the students in the control group were allowed to watch the recording (Figure 1).



**Figure 1.** CONSORT diagram. Passage of participants through each trial stage.

### Data Analysis

The data were evaluated with the SPSS 23.0 package program. Data on descriptive characteristics were given as numbers, percentages, mean chi-square; the difference between the groups' mean score regarding the knowledge of the nursing process and the case analysis skills was evaluated with the independent samples t-test; the difference between the scores on the knowledge of the nursing process (pretest-posttest) was evaluated with the paired sample t-test. The relationship between students' mean knowledge and skill scores was examined using Pearson's correlation analysis. Feedback from students in the experimental group on creative drama education is shown in the frequency table.

## Ethical Considerations

Written permission was obtained from the Human Research Ethics Committee prior to the research (IRB:2021/46). Before starting the research, students were informed about the study and an approval button was provided in the online forms to indicate that they were willing to participate in the research.

## RESULTS

Table 1 shows the general characteristics of research participants according to groups. There was no statistically significant difference between the groups in terms of age, grade point average, gender, high school of graduation or family structure ( $p > 0.05$ ).

**Table 1.** Participant characteristics according to groups ( $N = 59$ ).

Variables	Experimental group		Control group		Test/p
	Mean (SD)		Mean (SD)		
Age	19.66 (0.80)		19.34 (0.93)		$t = 1.419$ $p = 0.161$
Grade point (0-4)	2.48 (1.27)		2.58 (1.12)		$t = -0.332$ $p = 0.741$
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	
Gender					
Female	16	53.3	13	44.8	$X^2 = 0.427$
Male	14	46.7	16	55.2	$p = 0.514$
Graduated school					
Anatolian high school	25	83.3	24	82.8	$X^2 = 0.787$
Vocational health high school	5	16.6	5	17.2	$p = 0.480$
Family structure					
Protective	13	43.3	10	34.5	
Democratic	8	26.7	10	34.5	$X^2 = 0.831$
Permissive	6	20	5	17.2	$p = 0.842$
Authoritarian	3	10	4	13.8	

Note:  $X^2$ =Chi-square test,  $t$ =independent  $t$  test

Table 2 shows the participants' mean scores regarding knowledge of the nursing process and case analysis skills by group. Accordingly, the mean score of case analysis skills was statistically significantly higher in the experimental group than in the control group ( $p < 0.05$ ). Furthermore, the mean score of students in the experimental group regarding knowledge of the nursing process was statistically significantly higher posttest than pretest ( $p < 0.05$ ).

**Table 2.** Participants' mean scores regarding knowledge of the nursing process and case analysis skills by group ( $N = 59$ ).

	Min-Max	Experimental group	Control group	Test/p
		Mean (SD)	Mean (SD)	
Knowledge of the nursing process (pretest)	0-20	15.93 (2.51)	15.13 (3.29)	$t^a = 1.045$ $p = 0.301$
Knowledge of the nursing process (posttest)	0-20	16.20 (2.51)	15.27 (3.28)	$t = 1.217$ $p = 0.229$
<b>Test/p</b>		$t^b = 2.283$ $p = \mathbf{0.03^*}$	$t = -1.684$ $p = 0.103$	
Case analysis skills	0-40	22.73 (9.07)	15.14 (9.28)	$t = 3.088$ $p = \mathbf{0.003^*}$

Note: <sup>a</sup>Independent  $t$  test; <sup>b</sup>paired sample  $t$  test.

\*  $p < 0.05$ .



There was a positive and statistically significant correlation between students' mean score regarding the knowledge of the nursing process (posttest) and their mean score regarding case analysis skills (Table 3) ( $p < .05$ ).

**Table 3.** Correlation between students' mean score regarding the knowledge of the nursing process (posttest) and case analysis skills ( $N = 59$ ).

		Knowledge of the nursing process (pretest)	Knowledge of the nursing process (posttest)
Case analysis skills	$r$	0.269	0.986
	$p$	0.045	<b>0.000</b>

Table 4 presents the opinions of participants in the experimental group about case analysis with creative drama. Accordingly, there were no students who gave negative feedback and all found the experience fun, useful, memorable and instructive.

**Table 4.** Opinions of participants in the experimental group about case analysis with creative drama.

Feedbacks	n <sup>a</sup>
It was useful in the distance education process	8
It helped to keep the topic memorable.	10
It allowed me to interact with others.	12
It helped me learn a complex subject while having fun.	11
I learned how to communicate with the patient	3
It made me think more deeply when making a nursing diagnosis.	2

Note: <sup>a</sup>n is multiplied.

## DISCUSSION

This research was conducted to determine the impact of creative drama on students' knowledge of the nursing process and case analysis skills, and the results were discussed in line with relevant literature.

In the study, it was seen that the case analysis performed with creative drama increased students' mean score regarding the knowledge of the nursing process. This result shows that creative drama is effective in the teaching of the nursing process. Creative drama affects and supports the development of cognitive, affective and psychomotor skills of nurses (Rosengren & Lepp, 2019). No study in the literature was found to examine the effect of creative drama on the nursing process. It was seen that the studies carried out on the nursing process are generally related to what kind of problems are experienced by students at which stage of the process (Kokturk Dalcalı, 2021; Akansel & Palloş, 2020; Yildirim Keskin *et al.*, 2021). In a study conducted by Kim *et al.* (2021), it was determined that the simulation-based application positively affected the nursing process confidence scores of students (Kim *et al.*, 2021). It was also stated that the platform, which is a learning tool developed by Melo *et al.* (2018), would contribute to students' learning of the nursing process. Therefore, it is thought that the results of this research will contribute to available, relevant literature.

It is important to carry out case analysis studies on teaching of the nursing process. In case analysis, data about a patient are given to students who are asked to create a nursing care treatment using decision-making and problem-solving skills (Namadi *et al.*, 2019). In the research, it was seen that case analysis education accompanied by creative drama increased the students' scores regarding case analysis skills, indicating that creative drama helps students in the formation of the nursing process.

Although there is no relevant study conducted with nursing students in the literature, it was stated that communication skills training based on creative drama increases students' self-efficacy levels (Molu *et al.*, 2019). In studies conducted with nursing students, it was seen that creative drama increases students' conflict management, critical thinking and empathetic education skills (Arteklev *et al.*, 2018; Çınar *et al.*, 2019). As a result, it can be said that creative drama is effective in many stages of nursing education.

In the research, a highly significant positive correlation was determined between the students' mean scores regarding knowledge of the nursing process and case analysis (posttest). It was observed that the case analysis scores of the student nurses increased as their score regarding the knowledge of the nursing process increased. According to Matney *et al.* (2016), nurses can acquire wisdom through reflection only by combining theoretical knowledge with experience. It was reported that elective courses such as creative drama and theater in higher education institutions are effective in increasing analytical thinking skills (Akkuş Çakır & Senemoğlu, 2016). Previously, it was speculated that the inclusion of courses such as drama and theater in the undergraduate nursing curriculum will contribute to the development of creativity and analytical thinking skills in students (Adıbelli & Kırca, 2021). In their study, Ljunggren *et al.* (2021) determined that the use of drama workshops in nursing education can increase students' understanding of professional communication about patient care (Ljunggren *et al.*, 2021). In a study conducted by Arveklev *et al.* (2018), most of the nursing students reported that drama helped them solidify the theoretical course content. All students initially stated that the concepts of care were theoretically abstract and difficult to comprehend and that they were not sure how to use them in practice. However, they then mentioned that creative drama worked as a tool to help develop theoretical knowledge and connect theory with practice. Therefore, this finding of the study supports the literature.

In the research, when the opinions of the participants in the experimental group about the drama workshop were examined, it was seen that there was no negative feedback. Students stated that creative drama increased interaction, enabled learning about a complex subject with fun and made the subject matter stick. Likewise, in a study conducted by Arteklev *et al.* (2018), nursing students stated that drama had positive effects such as being active and participating in learning. Students also stated that creative drama facilitated their learning by activating all their senses, solidified their knowledge and made them feel as if they had improved their professional learning. In interviews held with students from different fields after the creative drama activities, participants stated that they had a lot of fun and were happy working together (Bal İncebacak *et al.*, 2017). It was determined that the creative drama method increases the interest, excitement, participation of students and interaction between them (Koç & Geçit, 2021). The findings of the current research show that the students have positive impressions about the use of creative drama in the development of knowledge of the nursing process and case analysis skills. This result is consistent with the positive effects of creative drama on students' knowledge of the nursing process and case analysis skills.

This research has limitation. Within the scope of this research, students did not attend clinical practices due to the pandemic. Therefore, the case analysis was carried out with patient diagnosis forms prepared by the instructors.

## CONCLUSION

As a result, it was determined that creative drama had a positive effect on first-year nursing students' knowledge and case analysis skills regarding the nursing process. This shows that it is necessary to utilize creative drama techniques in both theoretical and practical education of nursing students and the curriculum should be revised and arranged accordingly. More comprehensive studies are recommended to explore the impacts of the inclusion of creative drama techniques in the nursing education program.

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