

## Original Article

# The Effect of Nursing Education on Patient Satisfaction in Electroconvulsive Treatment

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### Abstract

**Aim:** This study was conducted to determine the effect of nursing education related to ECT care on patient satisfaction in a Mental and Neurological Diseases Hospital.

**Method:** The sample of the study constituted 69 patients. "Personal Information Form" and "Satisfaction Questionnaire" were used as data collection tools.

**Results:** The results indicated that a statistically significant correlation was found between the experimental and control groups before, on the day of treatment and after the treatment, and between the level of knowledge and satisfaction levels of the patients about receiving care.

**Implications for Practice:** The training given to nurses about the care procedure of the ECT process increased patients' satisfaction with nursing care before, on the day of and after the treatment.

**Keywords.** Electroconvulsive Therapy, Education, Training, Patient satisfaction, Nurse.

### Introduction

Electroconvulsive therapy (ECT), which has been used in the treatment of mental illnesses since 1938, is known as the process of creating widespread (generalized) convulsions by stimulating the brain tissue with electrical current (Loureiro Pereira-Soares, et al., 2021). ECT is used effectively and safely, mainly in treatment of depression (Benson-Martin, et al., 2016), also in mania, schizophrenia (Youn, et al., 2019), postpartum psychosis, post-stroke or accompanying Parkinson's disease, delirium, neuroleptic malignant syndrome and organic origin psychosis treatments (Kellner, Obbels & Sienaert 2019, Landry, Moreno, Patry, Potvin & Lemasson 2021). The frequency and number of ECT applications should be determined according to the diagnosis and the

individual characteristics of the patient. (Isserles, et al., 2020).

Although the ECT is an effective and safe treatment method, it is known that the society has concerns and worries about ECT. (Obbels, et al., 2017). Expressions of "electric" or "shock" therapy, past experiences and lack of information about treatment make it difficult to accept treatment by increasing anxiety and fear in patients who applied ECT (Obbels, et al., 2020). In particular, stigma by the community is the biggest obstacle for patients receiving ECT to accept treatment (Fox, 2018). In a study which is using qualitative methods, 6 parents of 5 adolescents were interviewed by using a self-designed semi-structured interview after the completion of ect course. , prior to ect the treating doctors did explain to them about the ect procedure,

they were given information booklet and they were not coerced to consent for ect. Some of the parents reported that they had dilemma prior to giving consent and were scared prior to the first ect.

However, as the clinical condition of their children improved, they felt that ect was a good treatment. (Grover, Varadharajan & Avasthi 2017). In another conducted study, it was observed that informing before ECT treatment affected patient satisfaction positively (Takamiya et al., 2019). In a study which examined ECT perceptions and knowledge in the 3 most populous countries in the World was founded greater public education is needed about ECT (Tsai, Huang, He, Selek & Rosenheck 2021).

Despite the technological advances and developments related to ECT treatment, such as the application with anesthesia, the special conditions and method of the treatment, the way it is administered, and the problems associated with memory, mental health professionals, as well as patients and their relatives, may have concerns and negative prejudices about ECT treatment (Aykut et. al. 2017). Adequate information about care and treatment are stated as important factors affecting patient satisfaction (Polat, Fatma Aydin & Uysal 2018).

Today, the expectations and needs of the patients have gained importance for the satisfaction of the patients who are the customers of health services Patient satisfaction is an important part of the quality of health services (Yazan, Sengul & Girgin 2018). Evaluation of patient satisfaction can be a guide in determining the quality of service and deficiencies in the field of health and eliminating these deficiencies (Karabulutlu & Yavuz 2019).The education of healthcare professionals, both undergraduate and postgraduate, should be improved to increase knowledge of ECT, reduce stigma, and acquaint psychiatrists with indications of ECT and specifics of this treatment modality is very important (Horinková, Bartecku & Kališová 2021).

This study was conducted to research the effect of nursing training related to ECT on patient satisfaction.

## **Material and Method**

**Research Type:** This study was conducted as a semi-experimental cross-sectional study in the a Mental and Neurological Diseases Hospital in order to determine the effect of nursing training related to ECT care on patient satisfaction.

**Population and Sample:** The population of the study consisted of 72 patients who were hospitalized at a Mental and Neurological Diseases Hospital and received ECT treatment between May 2019 and May 2020. The study was completed with 69 (35 Experiment Group and 34 Control Group) patients who voluntarily accepted to participate in the study.

### **Research Inclusion Criteria**

- Agreeing to participate in research after the purpose of the research has been announced.
- Being open to cooperation and communication,
- Being between the ages of 18-65,
- Being in the ECT treatment process
- Not being diagnosed with mental retardation

### **Research Process**

The research process stages are listed below.

- **Step 1:** In the first stage of the study, the ethics committee approval was obtained from a state university Non-Interventional ethics committee in order to conduct the research. Institutional permission was obtained from Elazig Mental and Neurological Diseases Hospital to conduct the study.
- **Step 2:** Data collection started with the control group. "Personal Information Form" and Satisfaction Questionnaire were collected from 34 patients in the control group who accepted the research and applied ECT.
- **Step 3:** The training on "before, during and after ECT" was given to the nurses working at the service, which was prepared in line with the literature and determined as the experimental group. After the training was given, a short reminder Training brochure was distributed to these nurses.
- **Step 4:** After the training, the nurses who cared for the experimental group patients were told to give information to the patients before, during and after the ECT according to the training they received.
- **Step5:** "Personal Information Form" and Patient Satisfaction Questionnaire were

collected from 35 patients who accepted the research in the experimental group—at the Mental and Neurological Diseases Hospital and received ECT.

• **Step 6:** Entering the obtained data into the statistics program and performing statistical analysis.

**ECT Training Procedure:** In the first 6-month period of the study, the satisfaction levels of the patients were determined without any intervention. Then, all the nurses who took part in the ECT process in the hospital were given ECT training by the researchers in cooperation with the hospital education unit. The satisfaction levels of the patients who had ECT were re-measured in the following 6-month period.

The training content consisted of cognitive, affective and psychomotor objectives. These; Cognitive objectives (Defining ECT, knowing the rate of application of ECT, discussing the perceptions of patients receiving ECT / explaining the level of satisfaction, discussing the historical development of ECT, explaining the mechanism of action of ECT, comprehending the working mode of ECT device, placement of electrodes in ECT to list the reasons for the unilateral application of ECT, to list the reasons for bilateral application of ECT, to comprehend how seizures occur in ECT, to list the factors affecting the seizure threshold in ECT, to list the diseases in which ECT is used, to list the special situations in which ECT is used To list the interactions of ECT with drugs, to list the contraindications of ECT, to comprehend the treatment duration and frequency of ECT, to list the situations in which preventive ECT should be applied, to explain the frequency of application of preventive ECT, to list the complications of ECT)

Emotional objectives (Nurses' awareness of their own perceptions of patients receiving ECT, being aware of the importance of equipment in the ECT room, understanding the importance of care given to patients before, during and after treatment in ECT, being sensitive to patients before, during and after treatment in ECT)

Cyclical objectives (In ECT, they should perform pre-treatment nursing care in accordance with the application form, in ECT, nursing care during treatment in accordance with the application form, in ECT, they

should perform nursing care in accordance with the application form after treatment)

#### **Data Collection Tools**

**Personal Information Form:** Demographic information forms were created by the researchers in order to determine the demographic characteristics of the patients.

**Patient Satisfaction Questionnaire:** In this form, which was prepared by the literature review, it was asked whether the patients were informed about the nursing care service received before, during and after the treatment and whether they were satisfied with this care.

**Limitations of the Study:** Choosing of the control group from the same center.

**Generalizability of the Study:** The results of the study can be generalized to groups that are similar in terms of the criteria for inclusion of the research and the research variable.

**Ethical Aspect of the Research:** Ethics committee permission from a state university Non-Invasive Ethics Committee and institutional permission from a Mental and Neurological Diseases Hospital were obtained for the realization of the study. Before starting to collect research data in order to protect the rights of patients within the scope of the research; the ethical principles have been fulfilled that included; the principle of "Informed Consent" by explaining the purpose of the study to the patients, the principle of "Protection of Confidentiality and Confidentiality" by stating that the information obtained would be kept confidential, and the principle of "Respect for Autonomy" by recruiting those who voluntarily participated in the study. The ethical principle of "Respect for Human Dignity" will also be taken into consideration in the research. Those who were willing to participate in the study were included in the research.

All procedures were performed in accordance with the ethical standards of a state university the 1964 Declaration of Helsinki, and its later amendments. Both authors have been personally and actively involved in substantive work leading to the manuscript, and hold themselves jointly and individually responsible for its content.

Ethics committee permission from Munzur University Non-Invasive Ethics Committee and institutional permission from Elazığ Mental and Neurological Diseases Hospital were obtained for the realization of the study.

**Data Analysis:** NCSS (Number Cruncher Statistical System) 2007 (Kaysville, Utah, USA) program was used for statistical analysis. While evaluating the study data, in addition to descriptive statistical methods (Average, Standard Deviation, Median, Frequency, Ratio, Minimum, Maximum), the distribution of the data was evaluated using the Shapiro-Wilk Test. Chi-square was used to determine the correlation between qualitative data. Significance was evaluated at  $p < 0.01$  and  $p < 0.05$  levels.

## Results

A 24.6% ( $n = 17$ ) of the participants are working, 75.4% ( $n = 52$ ) are not working, a 34.8% ( $n = 24$ ) of the participants are women, 65.2% ( $n = 45$ ) of them are men and 66.7% ( $n = 46$ ) of the participants are single, 33.3% ( $n = 23$ ) are married.

Regarding literacy a 7.2% ( $n = 5$ ) of the participants were illiterate, and a 24.6% ( $n = 17$ ) were literate, a 53.6% ( $n = 37$ ) were primary school-secondary school graduated, an 11.6% ( $n = 8$ ) of them were high school graduated and a 2.9% ( $n = 2$ ) were university graduated or higher.

A 40.6% ( $n = 28$ ) of the participants came voluntarily, a 31.9% ( $n = 22$ ) were brought by family / relatives, a 18.8% ( $n = 13$ ) brought by Judicial Institution / Police and a 8.7% ( $n = 6$ ) came with the other ways.

A 31.9% ( $n = 22$ ) of the participants received psychological treatment without hospitalization, 68.1% ( $n = 47$ ) were hospitalized, of the participants a 4.3% ( $n = 3$ ) were ECT applied patients, 5.8% ( $n = 4$ ) were anesthetized ECT applied patients, and 89.9% were patients who never had ECT before the study.

A 82.6% of the participants ( $n = 57$ ) had a family history of psychiatric illness, a 17.4% ( $n = 12$ ) had a family history of psychiatric illness, but ECT was not applied. A 68.1% ( $n = 47$ ) of the participants have anxiety and fear, 29% ( $n = 20$ ) are treated and 2.9% experience a feeling of torture. A 76.8% ( $n = 53$ ) of the participants smoke, 23.3% ( $n = 16$ ) do not and a 2.9% ( $n = 2$ ) of the participants use alcohol, 97.1% ( $n = 67$ ) do not.(Table 2)

There is a statistically significant correlation between the 1st question before treatment and

education receiving status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant correlation between the 2nd question before treatment and education receiving status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant correlation between the 3rd question before treatment and education receiving status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant correlation between the 4th question before the treatment and education receiving status ( $p = 0.001$ ;  $p < 0.01$ ). There is no statistically significant correlation between the 5th question before treatment and education status ( $p > 0.05$ ).(Table 3)

There is a statistically significant correlation between the 1st question on the day of treatment and education receiving status ( $p = 0.001$ ;  $p < 0.01$ ). There is no statistically significant correlation between the 2nd question on the day of treatment and education receiving status ( $p > 0.05$ ). There is a statistically significant correlation between 3rd question on the day of treatment and education receiving status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant correlation between 4th question on the day of treatment and education receiving status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant correlation between 5th question on the day of treatment and education receiving status ( $p = 0.001$ ;  $p < 0.01$ ). There is no statistically significant correlation between 6th question on the day of treatment and education receiving status ( $p > 0.05$ ). There is a statistically significant correlation between 7th question on the day of treatment and education receiving status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant correlation between 8th question on the day of treatment and education receiving status ( $p = 0.001$ ;  $p < 0.01$ ).(Table 4)

During the treatment, there is no statistically significant correlation between the 1st question and education receiving status ( $p > 0.05$ ). There is no statistically significant correlation between the 2nd question during the treatment and education receiving status ( $p > 0.05$ ). (Table 5)

There is a statistically significant correlation between 1st question after the treatment and education receiving status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant



correlation between 2nd question and education receiving status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant correlation between the 3rd question after the treatment and education receiving status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant correlation between 4th question after the treatment and education receiving status ( $p = 0.007$ ;  $p < 0.01$ ). There is a statistically significant correlation between 6th question after the treatment and education receiving status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant correlation between the 6th question after the treatment and education receiving status ( $p = 0.001$ ;  $p < 0.01$ ). There is no statistically significant correlation between 7th question after the treatment and education receiving status ( $p > 0.05$ ). There is no statistically significant correlation between 8th question after the treatment and education receiving status ( $p > 0.05$ ). (Table 6)

There is a statistically significant correlation between the 1st question before the treatment and satisfaction status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant correlation between 2nd question before the treatment and satisfaction status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant correlation between the 3rd question before the treatment and satisfaction status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant correlation between the 4th question before the treatment and satisfaction status ( $p = 0.001$ ;  $p < 0.01$ ). There is no statistically significant correlation between the 5th question before the treatment and satisfaction status ( $p > 0.05$ ). (Table 7)

There is a statistically significant correlation between 1st question on the day of treatment and satisfaction status ( $p = 0.001$ ;  $p < 0.01$ ). There is no statistically significant correlation between 2nd question on the day of treatment and satisfaction status ( $p > 0.05$ ). There is a statistically significant correlation between 3rd question on the day of treatment and satisfaction status ( $p = 0.001$ ;  $p < 0.01$ ). There

is a statistically significant correlation between 4th question on the day of treatment and satisfaction status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant correlation between 5th question on the day of treatment and satisfaction status ( $p = 0.006$ ;  $p < 0.01$ ). There is no statistically significant correlation between 6th question on the day of treatment and satisfaction status ( $p > 0.05$ ). There is a statistically significant correlation between 7th question on the day of treatment and satisfaction status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant correlation between 8th question on the day of treatment and satisfaction status ( $p = 0.001$ ;  $p < 0.01$ ). (Table 8)

There is no statistically significant correlation between 1st question during treatment and satisfaction status ( $p > 0.05$ ). There is no statistically significant correlation between 2nd question during treatment and satisfaction status ( $p > 0.05$ ). (Table 9)

There is a statistically significant correlation between 1st question after the treatment and satisfaction status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant correlation between 2nd question after the treatment and satisfaction status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant correlation between 3rd question after the treatment and satisfaction status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant correlation between 4th question after the treatment and satisfaction status ( $p = 0.001$ ;  $p < 0.01$ ). There is a statistically significant correlation between 5th question after the treatment and satisfaction status ( $p = 0.006$ ;  $p < 0.01$ ). There is a statistically significant correlation between 6th question after the treatment and satisfaction status ( $p = 0.001$ ;  $p < 0.01$ ). There is no statistically significant correlation between 7th question after the treatment and satisfaction status ( $p > 0.05$ ). There is no statistically significant correlation between 8th question after the treatment and satisfaction status ( $p > 0.05$ ). (Table 10)

**Table 1. Age Measurement Averages**

	<i>Means±SD</i>	<i>Min-Max (Median)</i>
<i>Age</i>	38.57±11,35	19-61 (36)

The age value ranged from 19 to 61, and the mean was found to be 38.57 ± 11.35. (Table 1)

**Table 2. Socio-Demographic Data Means and Percentages**

		<b>N</b>	<b>%</b>
<b>Gender</b>	Female	24	34.8
	Male	45	65.2
<b>Working Status</b>	Working	17	24.6
	Not Working	52	75.4
<b>Marital Status</b>	Single	46	66.7
	Married	23	33.3
<b>Education Status</b>	Literate	5	7.2
	Illiterate	17	24.6
	Primary school- Secondary school	37	53.6
	High School	8	11.6
	University and Above	2	2.9
<b>Way of Coming to the clinic</b>	His own wish	28	40.6
	By Family / Relative	22	31.9
	By Judicial Institution / Police	13	18.8
	Other	6	8.7
<b>Psychological Hospitalization Status</b>	Not hospitalized	22	31.9
	Hospitalized	47	68.1
<b>Has ECT been applied</b>	ECT Applied Patients	3	4.3
	Anesthetized ECT Applied Patients	4	5.8
	ECT Unapplied Patients	62	89.9
<b>Alcohol Use</b>	Yes	2	2.9
	No	67	97.1
<b>Smoking</b>	Yes	53	76.8
	No	16	23.2
<b>Psychiatric History in the Family</b>	There is.	57	82.6
	There is, but ECT was not applied	12	17.4
<b>ECT Emotional Expression</b>	Has Anxiety and Fear	47	68.1

	Is being treated	20	29.0
	Torture	2	2.9

**Table 3: Relationship Between Pre-Treatment Knowledge Status and Study Groups**

		Study Groups		p
		Control Group	Experimental Group	
<b>1. Has any information been given about anesthetized ECT?</b>	<b>Yes</b>	10a (%28.6)	31b (%91.2)	<b>0.001**</b>
	<b>No</b>	25a (%71.4)	2b (%5.9)	
	<b>Don't know</b>	0a (%0)	1a (%2.9)	
<b>2. Have you been given the opportunity to express your concerns?</b>	<b>Yes</b>	0a (%0)	26b (%76.5)	<b>0.001**</b>
	<b>No</b>	35a (%100)	5b (%14.7)	
	<b>Don't know</b>	0a (%0)	3a (%8.8)	
<b>3. Have been taught techniques to cope with anxiety</b>	<b>Yes</b>	0a (%0)	7b (%20.6)	<b>0.001**</b>
	<b>No</b>	35a (%100)	17b (%50)	
	<b>Don't know</b>	0a (%0)	10b (%29.4)	
<b>4. Was it checked for Drug Allergy?</b>	<b>Yes</b>	0a (%0)	32b (%94.1)	<b>0.001**</b>
	<b>No</b>	34a (%97.1)	0b (%0)	
	<b>Don't know</b>	1a (%2.9)	2a (%5.9)	
<b>5. Have you been told to go hungry after 23.59 at night?</b>	<b>Yes</b>	34 (%97.1)	34 (%100)	0.507
	<b>No</b>	1 (%2.9)	0 (%0)	

Chi-Square Testi \*p<0.05

**Table 4: The Relationship Between the Day of Treatment Information Status and the Study Groups**

		Study Groups		
		Control Group	Experimental Group	
<b>1. Have you been told that you need to remove your make-up, nail polish, hairpin, accessories?</b>	<b>Yes</b>	14a (%40)	34b (%100)	<b>0.001**</b>
	<b>No</b>	21a (%60)	0b (%0)	
<b>2. Have you been told that you need to remove prostheses, dentures, glasses, hearing aids, contact lenses?</b>	<b>Yes</b>	32 (%91.4)	34 (%100)	0.125
	<b>No</b>	3 (%8.6)	0 (%0)	

<b>3. Have you been able to express your feelings and concerns about the treatment?</b>	<b>Yes</b>	4a (%11.4)	22b (%64.7)	<b>0.001**</b>
	<b>No</b>	31a (%88.6)	7b (%20.6)	
	<b>Don't know</b>	0a (%0)	5b (%14.7)	
<b>4. Have your questions about treatment been answered?</b>	<b>Yes</b>	2a (%5.7)	23b (%67.6)	<b>0.001**</b>
	<b>No</b>	33a (%94.3)	10b (%29.4)	
	<b>Don't know</b>	0a (%0)	1a (%2.9)	
<b>5. Have your valuables been kept securely and been explained to you?</b>	<b>Yes</b>	29a (%82.9)	34b (%100)	<b>0.001*</b>
	<b>No</b>	6a (%17.1)	0b (%0)	
<b>6. Have you been asked if you are hungry?</b>	<b>Yes</b>	34 (%97.1)	34 (%100)	0.507
	<b>No</b>	1 (%2.9)	0 (%0)	
<b>7. Has your hair been cleaned to ensure electrode contact. have you been bathed?</b>	<b>Yes</b>	0a (%0)	5b (%14.7)	<b>0.014*</b>
	<b>No</b>	35a (%100)	29b (%85.3)	
<b>8. Has vascular access been maintained / has a vascular access been established?</b>	<b>Yes</b>	1a (%2.9)	34b (%100)	<b>0.001**</b>
	<b>No</b>	34a (%97.1)	0b (%0)	

Chi-Square Test \* $p < 0.05$

**Table 5: Correlation Between Information Status During Treatment and Study Groups**

		<b>Study Groups</b>		
		<b>Control Group</b>	<b>Experimental Group</b>	
<b>1. Have the ECT team been introduced to you?</b>	<b>Yes</b>	0 (%0)	2 (%5.9)	0.199
	<b>No</b>	35 (%100)	31 (%91.2)	
	<b>Don't know</b>	0 (%0)	1 (%2.9)	
<b>2. Have you been delivered to the ECT unit with your file accompanied by a nurse?</b>	<b>Yes</b>	33 (%94.3)	34 (%100)	0.368
	<b>No</b>	1 (%2.9)	0 (%0)	
	<b>Don't know</b>	1 (%2.9)	0 (%0)	

Chi-Square Test \* $p < 0.05$



**Table 6: Correlation Between Post-Treatment Information Status and Study Groups**

		Study Groups		
		Control Group	Experimental Group	
1. Did the nurse pick you up from the ECT unit and take you to the collection room?	Yes	14a (%40)	33b (%97.1)	0.001**
	No	18a (%51.4)	0b (%0)	
	Don't know	3a (%8.6)	1a (%2.9)	
2. Have necessary precautions been taken for the risk of trauma?	Yes	12a (%34.3)	33b (%97.1)	0.001**
	No	13a (%37.1)	0b (%0)	
	Don't know	10a (%28.6)	1b (%2.9)	
3. Have you been given a suitable position?	Yes	18a (%51.4)	32b (%94.1)	0.001**
	No	8a (%22.9)	0b (%0)	
	Don't know	9a (%25.7)	2b (%5.9)	
4. Have you been monitored for complications and side effects?	Yes	24a (%68.6)	33b (%97.1)	0.007**
	No	2a (%5.7)	0a (%0)	
	Don't know	9a (%25.7)	1b (%2.9)	
5. Have you been under observation until you regain consciousness?	Yes	23a (%65.7)	34b (%100)	0.001**
	No	3a (%8.6)	0a (%0)	
	Don't know	9a (%25.7)	0b (%0)	
6. Have you been properly transferred to your service?	Yes	29a (%82.9)	34b (%100)	0.001**
	Don't know	6a (%17.1)	0b (%0)	
7. Are you provided to rest?	Yes	32 (%91.4)	34 (%100)	0.125
	Don't know	3 (%8.6)	0 (%0)	
8. Are You provided to eat?	Yes	34 (%97.1)	32 (%94.1)	0.489
	Don't know	1 (%2.9)	2 (%5.9)	

Chi-Square Test \* $p < 0.05$

**Table 7: Correlation Between Pre-Treatment Satisfaction and Study Groups**

		Study Groups		p
		Control Group	Experimental Group	
1. Has any information been given about anesthetized ECT?	Satisfied	9a (%25.7)	32b (%94.1)	0.001**
	Dissatisfied	26a (%74.3)	2b (%5.9)	
2. Have you been given the opportunity to express your concerns?	Satisfied	0a (%0)	28b (%82.4)	0.001**
	Dissatisfied	35a (%100)	6b (%17.6)	
	Satisfied	0a (%0)	17b (%50)	

3. Have been taught techniques to cope with anxiety?	Dissatisfied	35a (%100)	17b (%50)	0.001**
4. Was it checked for Drug Allergy?	Satisfied	0a (%0)	34b (%100)	0.001**
	Dissatisfied	35a (%100)	0b (%0)	
5. Have you been told to go hungry after 23.59 at night?	Satisfied	33 (%94.3)	34 (%100)	0.254
	Dissatisfied	2 (%5.7)	0 (%0)	

Chi-Square Test \* $p < 0.05$

**Table 8: Correlation Between Treatment Day Satisfaction and Study Groups**

		Study Groups		
		Control Group	Experimental Group	
1. Have you been told that you need to remove your make-up, nail polish, hairpin, accessories?	Satisfied	15a (%42.9)	34b (%100)	0.001**
	Dissatisfied	20a (%57.1)	0b (%0)	
2. Have you been told that you need to remove prothesis, dentures, glasses, hearing aids, contact lenses?	Satisfied	32 (%91.4)	34 (%100)	0.125
	Dissatisfied	3 (%8.6)	0 (%0)	
3. Have you been able to express your feelings and concerns about the treatment?	Satisfied	3a (%8.6)	25b (%73.5)	0.001**
	Dissatisfied	32a (%91.4)	9b (%26.5)	
4. Have your questions about treatment been answered?	Satisfied	1a (%2.9)	22b (%64.7)	0.001**
	Dissatisfied	34a (%97.1)	12b (%35.3)	
5. Have your valuables been kept securely and been explained to you?	Satisfied	28a (%80)	34b (%100)	0.006**
	Dissatisfied	7a (%20)	0b (%0)	
6. Have you been asked if you are hungry?	Satisfied	34 (%97.1)	34 (%100)	0.507
	Dissatisfied	1 (%2.9)	0 (%0)	
7. Have your hair been clean to ensure electrode contact, have you been bathed?	Satisfied	1a (%2.9)	10b (%29.4)	0.001**
	Dissatisfied	34a (%97.1)	24b (%70.6)	
8. Has vascular access been maintained / has a vascular access been established?	Satisfied	2a (%5.7)	34b (%100)	0.001**
	Dissatisfied	33a (%94.3)	0b (%0)	

Chi-Square Testi \* $p < 0.05$

**Table 9: Correlation Between Satisfaction During Treatment and Study Groups**

		Study Groups		p
		Control Group	Experimental Group	
1. Have the ECT team been introduced to you?	<i>Satisfied</i>	0 (%0)	2 (%5.9)	0.239
	<i>Dissatisfied</i>	35 (%100)	32 (%94.1)	
2. Have you been delivered to the ECT unit with your file accompanied by a nurse?	<i>Satisfied</i>	34 (%97.1)	34 (%100)	0.507
	<i>Dissatisfied</i>	1 (%2.9)	0 (%0)	

Chi-Square Test \* $p < 0.05$

**Table 10: Correlation Between Post-Treatment Satisfaction and Study Groups**

		Study Groups		Study Groups
		Control Group	Experimental Group	
1. Did the nurse pick you up from the ECT unit and take you to the collection room?	<i>Satisfied</i>	15a (%42.9)	33b (%97.1)	<b>0.001**</b>
	<i>Dissatisfied</i>	20a (%57.1)	1b (%2.9)	
2. Have necessary precautions been taken for the risk of trauma?	<i>Satisfied</i>	21a (%60)	33b (%97.1)	<b>0.001**</b>
	<i>Dissatisfied</i>	14a (%40)	1b (%2.9)	
3. Have you been given a suitable position?	<i>Satisfied</i>	24a (%68.6)	33b (%97.1)	<b>0.001**</b>
	<i>Dissatisfied</i>	11a (%31.4)	1b (%2.9)	
4. Have you been monitored for complications and side effects?	<i>Satisfied</i>	28a (%80)	34b (%100)	<b>0.001**</b>
	<i>Dissatisfied</i>	7a (%20)	0b (%0)	
5. Have you been observed until you regain consciousness?	<i>Satisfied</i>	29a (%82.9)	34b (%100)	<b>0.006**</b>
	<i>Dissatisfied</i>	6a (%17.1)	0b (%0)	
6. Have you been properly transferred to your service?	<i>Satisfied</i>	31a (%88.6)	34b (%100)	<b>0.001**</b>
	<i>Dissatisfied</i>	4a (%11.4)	0b (%0)	
7. Are you provided to rest?	<i>Satisfied</i>	33 (%94.3)	34 (%100)	0.254
	<i>Dissatisfied</i>	2 (%5.7)	0 (%0)	
8. Are you provided to eat?	<i>Satisfied</i>	33 (%94.3)	33 (%97.1)	0.511
	<i>Dissatisfied</i>	2 (%5.7)	1 (%2.9)	

Chi-Square Test \* $p < 0.05$

## **Discussion**

This study, conducted with patients who applied ECT, in order to examine the effect of education about care practices before, during and after ECT given to nurses working in the Mental Health Hospital on patient satisfaction, was discussed with the relevant literature. In this study, 34.8% (n = 24) of the participants were female, while 65.2% (n = 45) were male. In the study conducted by Aydın et al. with 51 patients who received inpatient treatment in a psychiatry clinic and applied ECT, 43 (84.3%) of the participants were female and 8 (15.7%) were male (Aykut, 2017). This difference may have resulted from the high number of male patient clinics in the hospital where the study was conducted. In a retrospective study by Grover (2017) with 59 patients to evaluate the effectiveness of ECT, the majority of the patients were found to be male, single, and unemployed (Grover, 2017). The average age of the individuals participating in the study was found to be  $38.57 \pm 11.35$ . Aydın et al., found the average age  $41.7 \pm 13.1$  for the first group, and  $40.75 \pm 14.9$  for the second group, in the study that conducted with 40 patients in order to evaluate the effect of oxygen application during the apnea period of ECT on cerebral oxygenation by Near-Infrared Spectroscopy and on complications after ECT (Aydin, 2018). In this study, while 24.6% (n = 17) of the participants are working, 75.4% (n = 52) are not working. In a study conducted by Asoglu et al., on 53 patient data in order to retrospectively evaluate the diagnosis, sociodemographic and related characteristics of the patients who applied ECT and the rates of ECT in patients hospitalized in the psychiatry service. When examining the status of the patients working in a job or not, it was determined that 8 (15.1%) were working and 45 (84.9%) were not working (Asoglu, 2018). In this study, 66.7% of the participants were single, while 33.3% were married. Nazik Yuksel et al., ; found that 46.7% of the patients were single and 41.0% were married, in the study in which they retrospectively examined the treatment and follow-up one-year records of 105 patients who were hospitalized in a psychiatry clinic and received ECT (Yuksel, 2020).

In this study; statistically significant correlation was found between the knowledge

level of the patients about being taken into care before, on the day of, and after the treatment and their satisfaction status. Lack of education and experience in ECT affects nurses' ECT behavior (Gass, 2008). It is important for nurses to have sufficient information to help patients make rational and informed treatment decisions and to meet both clinical and psychological needs of patients treated with ECT.

The Nurses need knowledge and experience with the ECT process care procedure (Kavanagh A, 2009). Supports such as education can provide patients with greater confidence in the practice of ECT and nursing, and thus increase patient satisfaction. . (Compbell III, 2017; Wood, 2007) Lonergan emphasized in her qualitative study with 14 psychiatric nurses who gave ECT care that educational support for nurses working in the field of psychiatry would increase confidence in work practices and lead to improved patient experience. (Lonergan, 2020)

In our study, it was found that the satisfaction rate of patients who received ECT after training was higher. Nurses need knowledge and experience about the ECT process care procedure. In a study, it was found that "the ECT care scores and the total scores" of the nurses who provided ECT services before, during, and after the treatment were higher after the education about the care of patients who applied ECT (Arkan, 2008). In a randomized controlled study conducted to determine the effect of supportive nursing care on the satisfaction of patients receiving ECT in a psychiatric hospital, it was found that supportive nursing care increased satisfaction level in patients receiving ECT. (Navidian, 2015)

In this study, a statistically significant correlation was found between the question "Has any information been given about anesthetized ECT?" and education status before the treatment, and the question "Has any information been given about anesthetized ECT?" and the satisfaction status before the treatment. A statistically significant correlation was found between the question "Have you been given the opportunity to express your concerns?" and the education status before the treatment, and the question "Have you been allowed to

express your concerns?" and the satisfaction status before the treatment. A statistically significant correlation was found between the question "Have you been taught coping techniques with anxiety?" and the education status before the treatment, and the question "Have you been taught coping techniques with anxiety?" and the satisfaction status before the treatment. A statistically significant correlation was found between the question "Was it checked for drug allergy?" and the education status before the treatment, and the question "Was it checked for drug allergy?" and the satisfaction status before the treatment. The most important way of relieving this fear and anxiety that patients experience is to create a therapeutic environment where they can express themselves and find answers to their questions (Donmez, 2011). Patients, their families and behavioral health professionals need accessible information about patient experiences with ECT to guide treatment decisions and address concerns about the benefits and risks of treatment (Brown, 2018). Nurses play a critical role in all stages of ECT treatment (Bjørnshauge, 2019). In the conducted study, in order to determine the effectiveness and importance of the information to be given by the nurse in determining and eliminating the anxiety that occurs due to the lack of information before the administration of Anesthetized ECT in psychiatry patients, it was determined that the anxiety levels of those who were informed decreased statistically significantly compared to those who were not informed. (Atik, 2008). Besides personality-related factors, anxiety and fear may contribute to the patients' satisfaction with the ECT process. (Sienaert, 2005) In a study conducted to evaluate treatment satisfaction of patients who applied ECT and their relatives during treatment, it was found that there are many areas of concern, including fear of ECT, lack of knowledge, and the possibility of enduring cognitive problems, and are associated with satisfaction (Rajagopal R, 2013). At the end of this study, it was seen that the education given by the nurses before the ECT intervention increased the patient's satisfaction with the treatment. For this reason, all nurses working with ECT should be provided with in-service training on this subject and these nurses should be supported

to provide training to patients before the ECT procedure.

**Conclusion and Recommendations:** At the end of this study, it was observed that the education given by the nurses before the ECT intervention increased the patient's satisfaction with the treatment. In this way, the education process which was restricted by giving education only to patients, was given to nurses and more patients were reached. Therefore, in-service training should be given to all nurses working with ECT, and these nurses should be supported to provide training to patients before the ECT procedure.

### **Implications For Nursing Practice and Management**

1. Nurses who care for patients who are treated with ECT should be given regular in-service training for care before, during and after ECT treatment. In this way, the negative attitudes and behaviors of the caring nurse towards ECT treatment can be prevented.
2. Within the framework of this training given to nurses, patients who are treated with ECT should be cared for, the patient should be allowed to express their feelings and thoughts, and the lack of knowledge about treatment should be eliminated.
3. By creating a positive effect on patient satisfaction with the education given on ECT, negative judgments of ECT treatment in society can be prevented.

**Relevance Statement:** ECT is a treatment method that causes fear among the society and its reliability is still discussed. Therefore, patients and their relatives may have negative judgments about electroconvulsive therapy. The past experiences of the patients, the negative expressions of the patients receiving electroconvulsive therapy, and the use of "shock therapy" expressions for this form of treatment by healthcare professionals feed this fear. Therefore, satisfaction with the treatment decreases. For the solution of the problem; with this study, it will be contributed to the nurses who provide care to take training and the nurses to minimize patients' fears and worries by informing them within the framework of the training they receive.

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