

Original Research Article

## Factors Which Affect Patients' Experience in Intensive Care Units

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### ABSTRACT

**Background:** Stressors in intensive care units are defined as physiological and environmental. Aim of this study is the determination of the experiences that patients have been through and factors which affect these experiences.

**Methodology:** This study which was done in definitive and sectional pattern and its universe was composed of 198 volunteered patients who stayed in surgery, internal diseases and coronary intensive care units at least 24 hours and later transferred the related service and volunteered for the study. Research data was collected with "Patient Information Form" which consists of socio-demographic informations and "Intensive Care Experience Scale" (ICES). In the analysis of data, frequency, percentage, arithmetic mean, standard deviation, Mann Whitney U test, Kruskal Wallis test which was used in examination of relationship between sub dimensions.

**Results:** It was determined that total point average of patients is  $56.57 \pm 7.13$ , female patients' experiences are more positive than male patients' experiences, and more negative experiences have been through by the patients who receive mechanical ventilator support, have pain and admitted to intensive care unplanned ( $p > 0.05$ ). In addition, it was determined that intensive care type affects the intensive care experience of patient meaningfully ( $p < 0.05$ )

**Conclusions:** As a result of this work, partly negative experiences were determined in the intensive care patients. In addition to this, patients who have longer stay duration in intensive care, unplanned admitted and receive mechanical ventilator support have experience more negative experiences.

**Keywords:** Intensive care units, life experience, critical care patient.

### INTRODUCTION

Nowadays, patient monitoring in intensive care units and usage of advanced technology was increased the treatment capacity of patients who need complex care. In addition to this, until the recent years, ensuring the survival of patients accepted as a successful result, however it is stated that they are exposed negative emotional consequences in their time in the intensive care unit. <sup>[1]</sup> Because of this reason, these units are accepted as environments that patients encounter with many stressor in

terms of both physical and psychosocial aspect.

Stressors in intensive care units (ventilator usage, aspiration etc.) are defined as physiological (limitation of movement, frequent inspection or tactility, confusion, communication difficulties etc.) and environmental (continuous light and noise, uncomfort beds, unpleasant images and smells etc.). <sup>[2]</sup> Because of this reason, staying in intensive care units has big effects on patient and patient's relatives' psychosocial wellness. These effects can

continue both during the stay in the intensive care unit and after discharged. [3] In the literature, it is stated that intensive care units can be disturbing environment for the patients and they can experience certain negativeness in terms of emotions in their time in the intensive care. [3-5] Every day, increase in the usage of more technological devices in the intensive care unit is being lifesaver, however it can be frightening for patients and patient relatives. [1,5] Moreover these patients can be negatively affected because of the reasons such as being in a situation that need to be taken care of in the intensive care unit, perception loss of night and day and change in the sleeping pattern, isolation, unusual environment and not be able to see family and people who close to them, disease, and insufficient information about disease, treatment and applications. [6,7] Most of the conducted studies show that patients had negative experiences because of the reasons which were stated above. [2,6,8,9]

Despite of successfully provided physical needs of patients who have been taken care of in the intensive care unit, what do they experience and which kind of emotional situation they are in the intensive care units is not a subject that fully be aware of. [1] However, examination of the experiences that patients have been through in the intensive care units and becoming aware of what they experience can be pathfinder to institutions in planning of service for the positive development of patient results and can benefit healing process of the patient. Purpose of the study is to determine the experiences of patients who stay in the intensive care and factors that affect these experiences.

## **MATERIALS AND METHODS**

### **Setting and Sample**

This study, which was conducted as in definitive and sectional pattern, was done in a public hospital between February-May 2015 dates. Study universe was formed by the patients in the intensive care unit of the hospital where the study was conducted.

Sample of the study was formed by 198 patients who stay in the hospital in the time when the study were conducting, stayed at least 24 hours in intensive care units and transferred the related service after the completion of the treatment and caring services in intensive care unit, can communicate and do not have difficulty to understand and volunteered for the study. Patients who did not volunteer and did not have consciousness, directly discharged after the care in the intensive care unit or his/her discharge planned after the day transferred from service, are left out of the study.

### **Instruments**

Data of the research was gathered by using "Patient Information Form" which consists of socio-demographic information of patients and "Intensive Care Experience Scale" (ICES).

**Patient Information Form:** It was prepared by researchers by scanning literature and consists of questions such as intensive care unit that they received care, duration of stay in intensive care, the number of admissions to intensive care, admission type.

**Intensive Care Experience Scale (ICES):** Scale was developed by Rattray and friends in 2004, in order to evaluate the experiences of patients in the intensive care. Adaptation work for our country was done by Demir et al. (2009). ICES was consisted of 19 items and in form of 5-point grading system. In the evaluation of first 10 questions, statements graded as; "every time" statement 1 point, "most of the time" 2 points, "sometimes" statement 3 points, "rarely" statement 4 point and "never" statement 5 points. In the 11-19 questions of the scale grading was done as to be "strongly agree" statement 1 point, "agree" statement 2 point, "neutral" statement 3 point, "disagree" statement 4 point and "strongly disagree". 4 items in the scale is graded reverse. The highest grade that can be taken from the 5-point likert type ICES scale which consists of 19 items, is 95 and the lowest point is 19. Scale consists of 4 sub dimensions which are being aware of

the environment, pessimistic experiences in intensive care units, recall of the experiences in intensive care units and satisfaction from care which was received in the care. Low grades that taken from scale show the negative experience of the patient in the intensive care; high points show that intensive care experience was positive. [1] Cronbach Alpha coefficient of ICES was found as 0,71 in this study.

**Ethical Issues**

This study was conducted in accordance with Helsinki Declaration principles. Before surveys filled by patients, they informed and voluntary basis was considered. To initialize the research, written permissions from the related institution and verbal approvals from the patients were obtained providing information about the current research and data collection tools.

**Data Analysis**

Research data was evaluated in SPSS (Statistical Program for Social Sciences) 16.5 programs. In the analysis of data; frequency, percentage, arithmetic average, and standard deviation was calculated. Aberrant distribution of scale points were determined (Kolmogorov-Smirnov  $Z=2.970$ ,  $p<0.05$ ) therefore in order to examine the difference between independent variables and scale total and sub dimension point averages, Mann Whitney U test and Kruskal Wallis test were used. The analysis result  $p<0.05$  was accepted statistically significant.

**RESULT**

It was determined that 39.9 % of the participant patients are 65 years and older, 52.5 % of men, 77.3% are married and 63.1% are primary school graduates. In the Table 1, socio-demographic characteristics of patients and findings related to intensive care unit were given.

62.6 % of the patients admitted to intensive care first time and it was determined that 19.7 % stayed 1 day and 3.1% stayed in the intensive care more than 16 days. It was determined that 64,1% of the

patients were admitted to intensive care unit unplanned, 25.8% were in the support of mechanical ventilation, 39.9 % stayed in internal diseases, 26.8% were in surgical, 33.3% were in coronary intensive care unit and 72.2% have experienced pain in their time in the intensive care unit.

**Table 1. Characteristics of the Patients related to Intensive Care**

Characteristics	n	%
<b>Admission number to intensive care</b>		
First admission	124	62.6
2-3 times	51	25.8
More than 3	23	11.6
<b>Duration of the intensive care</b>		
1 day	39	19.7
2-7 days	124	62.6
8-15 day	29	14.6
16 days and more	6	3.1
<b>Intensive Care Type</b>		
Internal diseases intensive care	79	39.9
Surgical intensive care	53	26.8
Coronary intensive care	66	33.3
<b>Admission type to Intensive care</b>		
Planned	71	35,9
Unplanned	127	64,1
<b>Situation of Being in Mechanic Ventilation</b>		
Yes	51	25.8
No	147	74.2
<b>Pain situation in intensive care</b>		
Exists	143	72.2
Does not exist	55	27.8
<b>TOTAL</b>	<b>198</b>	<b>100.0</b>

**Table 2. ICES and Sub-dimensions' Definitive Features**

Sub dimensions of ICES	Min.	Max.	X±SS
Being aware of the environment	6.00	30.00	19.51±2.31
Experienced pessimistic experiences	7.00	20.00	10.63±1.83
Recall of the experiences	7.00	22.00	12.89±2.90
Satisfaction from the received care	4.00	19.00	11.14±2.36
<b>Total Scale</b>	<b>38.00</b>	<b>75.00</b>	<b>56.57±7.13</b>

It was determined that total ICES point of the volunteered patients is  $56.77±7.13$ ; being aware of the environment sub dimension is  $19.51±2.31$ ; pessimistic experiences in intensive care sub dimension is  $10.63±1.83$ ; recall of the experiences in the intensive care unit subdimension is  $12.89±2.90$ ; satisfaction from the received care sub dimension is  $11.14±2.36$ . (Table2).

According to the variables such as age group, education level and marital status of patients, no significant difference was found between ICES and sub dimensions of scale point averages. However, it was found that female patients ( $54.90±9.41$ ) have more meaningful positive experiences in comparison with male patients

(45.76±15.61) (p<0.05). A significant difference was determined in terms of points between being aware of the environment and experienced pessimistic experiences sub dimensions, according to gender variable (p<0.05). Change of scale points according to admission number to intensive care was not found statistically meaningful (p>0.05).

However, when the points of patients which were taken from sub dimensions of ICES examined; meaningful difference was determined between point averages that patients got experienced pessimistic experiences sub dimension (p>0.05) (Table 3).

**Table 3: Distribution of ICES sub dimension points according to some characteristics of patients**

CHARACTERISTICS	N	Being aware of the environment X±SD	Experienced Pessimistic experiences X±SD	Recall of the experiences X±SD	Satisfaction from received care X±SD	Total X±SD
<b>Age Group</b>						
22-45 years	51	17.61±7.04	13.41±3.03	12.43±2.82	9.13±3.09	55.23±11.61
46-65 years	68	15.09±6.13	12.33±3.96	13.18±2.29	9.35±3.72	53.37±11.25
65 years and older	79	17.19±6.21	12.03±3.39	13.68±2.83	8.21±3.22	54.07±10.90
Statistical analysis <sup>1</sup>		p=0.180	p=0.690	p=0.386	p=0.658	p=0.776
<b>Gender</b>						
Female	94	20.50±6.51	12.20±3.17	12.95±2.57	9.23±3.33	54.90±9.41
Male	104	15.54±7.01	9.72±3.61	13.77±3.02	9.27±4.43	45.76±15.61
Statistical Analysis <sup>2</sup>		p=0.032*	p=0.010*	p=0.074	p=0.974	p=0.020*
<b>Admission number to intensive care</b>						
First time	124	19.93±6.01	13.93±3.83	12.03±2.81	9.14±3.82	54.10±10.51
2-3 times	51	17.14±7.31	14.32±3.15	12.82±2.09	9.03±3.64	53.92±10.16
More than 3	23	17.03±6.73	15.46±3.09	13.15±2.17	8.80±3.17	54.82±10.71
Statistical Analysis <sup>1</sup>		p=0.872	p=0.497	p=0.306	p=0.318	p=0.381
<b>Duration of Stay in Intensive Care</b>						
1 day	39	17.71±6.12	12.33±3.47	13.28±2.95	10.15±3.27	58.48±10.06
2-7 days	124	16.09±6.37	12.33±3.61	13.93±2.72	9.31±3.57	55.48±10.06
8-15 days	29	16.63±7.32	10.10±3.01	13.06±2.60	8.88±3.89	53.50±10.91
16 days and more	6	14.07±5.87	8.78±3.42	13.36±3.20	9.36±4.04	51.10±10.47
Statistical Analysis <sup>1</sup>		p=0.239	p=0.026*	p=0.171	p=0.203	p=0.142
<b>Situation of being in mechanical ventilator support</b>						
Yes	51	13.48±6.19	11.39±3.88	13.12±3.11	8.51±4.38	51.51±11.51
No	147	17.23±6.73	13.71±3.25	13.32±2.66	9.51±3.53	56.78±10.25
Statistical Analysis <sup>2</sup>		p=0.023*	p=0.016*	p=0.689	p=0.146	p=0.028*
<b>Pain experience situation</b>						
Exists	143	18.95±6.96	15.73±2.77	10.34±3.33	10.68±2.93	54.08±9.99
Does not exist	55	16.54±6.35	11.19±3.55	13.09±2.52	8.98±3.17	55.72 ±9.55
Statistical Analysis <sup>2</sup>		p=0.285	p=0.028*	p=0.017*	p=0.348	p=0.410
<b>Intensive care type</b>						
Internal diseases intensive care	79	18.04±6.73	16.91±2.12	12.62±2.73	9.02±3.41	56.18±9.82
Surgical intensive care	53	17.16±6.03	15.53±2.05	12.05±2.77	8.31±3.10	56.60±9.25
Coronary intensive care	66	17.34±6.28	16.81±2.70	13.11±2.12	12.27±2.83	55.53±9.01
Statistical analysis <sup>3</sup>		p=0.274	p=0.781	p=0.340	p=0.025*	p=0.452
<b>Admission type to intensive care</b>						
Planned	71	18.04±6.73	11.71±2.86	11.52±2.92	9.92±3.52	56.68±9.01
Unplanned	127	17.16±6.03	14.03±4.82	12.92±2.10	8.71±3.56	57.82±9.45
Statistical Analysis <sup>2</sup>		p=0.293	p=0.022*	p=0.348	p=0.567	p=0.346

1=Kruskal Wallis Test, 2=Mann Whitney U Test, \*p<0.05

In the study, it was determined that total scale and being aware of the environment in intensive care and experienced pessimistic experiences sub dimension point averages of patients who receive mechanical ventilator support are lower than the patients who do not receive ventilator support (p>0.05). Higher points of pain experienced patients, which were taken from the experienced pessimistic experiences and recall of the experiences in

intensive care, than the no pain experienced patients was determined (p<0.05). On the other side, when the points of patients which they received from ICES subdimensions were examined according to the intensive care unit that they stayed; a statistically meaningful difference was found between point averages that they received satisfaction from care sub dimension in the intensive care unit (p<0.05). It was determined that patients who admitted to

intensive care unplanned, have more pessimistic experiences than planned patients (Table 3).

## DISCUSSION

In this study, which was done in order to examine the experiences of patients who stayed in the intensive care and factors that affect these experiences, regardless of the fact that point averages of patients, who are in the scope of the research, from ICES ( $56.57 \pm 7.13$ ) was found lower than similar conducted studies, [2,5,6,11-13] some study results were found similar. [3,9,14-16] Despite of the non existence of break point for evaluation of scale point, in the direction of this finding, it can be said that intensive care experiences of patients are partly negative.

In the end of the study, when the intensive care experience scale sub dimension point averages evaluated; it was seen that being aware of the environment subdimension point average is the highest, and the experienced pessimistic experiences sub dimension point average is the lowest. These results show similarity with other conducted study findings in our country by using the same scale. [5,6,17] According to this, because of the consideration of these consequences by health professionals while applying care and treatment to all individuals who have open or closed consciousness, it is important that health professionals must accept that patients can be aware of the environment while having a closed consciousness.

In the study, while determining no difference in the intensive care experiences according to age, education level and marital status of patients. It was found that female patients have more positive intensive care experiences than male patients. In the literature, it is stated that women are developed physically and psychologically in the earlier ages, more participating, and have early developed verbal abilities, perceive the world with personal, aesthetic and moral aspects and have more empathetic characteristics, and in this context, they have high awareness and

sense. [2] In addition to this, while some studies state that intensive care experiences of female patients are more positive than male patient group as in parallel with our finding, [2,11] some study results stated that gender variable does not affect the study results. [6,14,17-19] This difference between research results can be explained with conduction on different groups that have socio-cultural level.

In this study, it was found that duration of stay in intensive care unit affects the experienced pessimistic experiences sub dimension point averages meaningfully. According to this, it can be said that patients who stayed more than eight days in the intensive care have more negative experiences due to the exposure to very complicated, lifesaver and supportive technological devices. Furthermore in the study, it was determined that intensive care type does affect the experiences of patients meaningfully ( $p < 0.05$ ) (Table 3). According to these, it is seen that patients who stayed in the coronary intensive care unit have higher satisfaction points from intensive care. This situation can be the result of the facts that patients exposed to more life supportive technological and medicine initiatives and having more serious medical diagnosis and prognosis, and more patients in surgical and internal diseases intensive care units, in comparison with coronary intensive care units.

In the study, it was determined that patients who admitted to intensive care unit planned, experienced more pessimistic experiences than the planned ones. Individuals are accepted to intensive care units unplanned in life threatening very emergency situations (cardiac/ respiratory arrest, sepsis, multiple organ failure etc.). [17] In the situations like these, patients were implemented with caring and treatment methods which include many life support systems (Hemodialysis, liver support therapy, treatment with MVA etc). [20] During these implementations, it is indicated that individuals experience many negative experiences [21] Therefore, more

pessimistic experiences of unplanned admitted patients was commented as a natural result of unplanned intensive care experience process.

In our study, rate of patient who stated pain in the intensive care, is very high (n=143, 72, 2%). Puntillo et al. (2001) stated that 40% of intensive care patients experience pain and 87% stated pain as a disturbing experience from medium level to high level. [22] Therefore, pain that commonly seen in intensive care unit patients, is experienced from low to high level by the most of the patients. [23] In this study, it was determined that patients with pain experience more negative experience than the patients with no pain. This finding shows similarity with other conducted studies. In the study of Engström and Söderberg (2004), it was also stated that patients, who exposed to painful applications and experience pain, expressed intensive care environment as “scary place”. [16]

## CONCLUSION

In the result of this study; it was determined that intensive care experiences of patients are partly negative, female patients are more positive than male patients, and patients that stay longer in the intensive care unit, receive mechanical ventilator support, have pain and admitted to intensive care unplanned, have been through more negative experiences. Patient care forms an important of intensive care patients' treatment. Because of this reason, while intensive care nurses carry out the patients' care; they must approach carefully the subjects of elimination of scare and anxieties which were resulted of admission to the intensive care unit, ensuring adaptation to intensive care environment and focusing on the healing process. Nursing care that will be carried out in this direction will benefit the development of patient-nurse relationship and experiencing more positive experiences, and it will make them feel safer and communicate more freely. According to the study results,

individualized nursing care planning and implementation are seen more important by taking individual and disease characteristics such as gender in consideration. Moreover, explaining the care and treatment actions to patients that has taken sedative and have open or closed consciousness and continuous communication, correct diagnosis of patient pains, are very important in terms of patient outcomes. Moreover, giving explanatory information related to care and treatment of patient who admitted intensive care planned and preparation of descriptive booklets by the institution can prevent the negative experiences which patients will experience.

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