ORIGINAL ARTICLE

Factors affecting experiences of intensive care patients in Turkey: patient outcomes in critical care setting

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Abstract

Objectives: To determine the factors affecting a patient's intensive care experience.

Methods: The descriptive study was conducted at an intensive care unit in the Aegean Region of Turkey, and comprised 158 patients who spent at least 48 hours at the unit between June and November 2009. A questionnaire form and the Intensive Care Experience Scale were used as data collection tools. SPSS 11.5 was used for statistical analysis of the data.

Results: Of the total, 86 (54.4%) patients related to the surgical unit, while 72 (45.5%) spent time at the intensive care unit. Most of the subjects (n=113; 71.5%) reported that they constantly experienced pain during hospitalisation. Patients receiving mechanical ventilation support and patients reporting no pain had significantly higher scores on the intensive care experience scale. Patients who reported pain remembered their experiences less than those having no pain.

Conclusions: Interventions are needed to make the experiences of patients in intensive care more positive.

Keywords: Nurse, Nursing intervention, Intensive care, Intensive care experience. (JPMA 63: 821; 2013)

Introduction

Today, the use of patient monitoring and advanced technology in intensive care units (ICUs) have increased the treatment capacity for patients requiring complex care due to life-threatening diseases.[1] Just the accomplishment of keeping such patients alive was deemed a success until recent years, but it is now widely accepted that these patients are also exposed to emotional stress while hospitalised in an intensive care environment.[2,3] The physical and psychological effects of an ICU stay cause a clinical picture called 'intensive care syndrome (ICS).' Agitation, orientation disorder, hallucinations and sleep disorders have been reported in patients with ICS.[4,5] In addition, annoyances are due at least in part to patients hearing hospital personnel speaking and laughing loudly and to the loud sounds of various machines. Noise levels in ICUs are reported to be an important factor causing sleep disorders for the patients. Patients also report high levels of annoyance being due to the fact that they are made to lie in the same position for a long time, and to experiencing thirst and pain.[6-9]

Patients having negative intensive care experiences identify their experiences as 'scary' and 'persecutory'.[8,10] Scragg et al. monitored intensive care patients after discharge, and found that 47% of the patients reported anxiety, and 38% reported depressive symptoms, while in intensive care.[11] In other studies, many patients stated that they rarely remembered or that their remembered experiences in intensive care in no way encompassed strange perceptual experiences and remembrances, including unlikable events, pain, sleeplessness, persecutory and scary hallucinations or some dreams.[1,3]

One goal of intensive care nursing is to balance the individual's physiological, psychological, emotional and social needs as much as possible while providing personal care directly affecting his/her life.[12] In previous studies, the most important factor affecting patient intensive care experiences was nursing interventions.[9,13,14] Accordingly, qualified nursing care, with nurses constantly accompanying the patient, communicating with the patient and considering the patient's emotional and sociocultural needs as well as attending to physical needs, can help patients have a positive intensive care experience.[15-18]

It is not well recognised, especially in Turkey, that the emotional status of patients and their previous experiences impacts the care requirements of ICU patients. There do not exist sufficient studies in Turkey that analyse experiences of intensive care patients considering the many environmental, physical and

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psychological stressors that exist in such situations. By defining ICU patient experiences and the characteristics of such patients, the present study tried to function as a basis for further such studies.

Patients and Methods

The descriptive study was performed at an ICU within a research and education state-run hospital located in the Aegean Region of Turkey between June and November 2009. The patients had been reported by different clinics such as Surgery, Gynaecology-Obstetrics, Cardiovascular Surgery, Cardiology, Internal Medicine and Neurology. The sample size was calculated on the basis of confidence interval (CI), and according to the formula related to sample size in descriptive studies with continuous variables. The standardised CI width was calculated as 4/6 = 0.6: the standard deviation of scale being 6, and the total width of CI being 4. We needed 120 patients for the study, while we employed 158 patient who had spent at least 48 hours in the ICU. Data was collected when the patients were transferred from the ICU to the wards. Data was collected using a pre-desigmed patient information form for socio-demographical information and the Intensive Care Experience Scale (ICES), which was developed in 2004 to enable evaluation of patient experiences in ICUs.[10] The minimum score is 19 and the maximum is 95 points; there being 19 likert type items with 5 choices for each item.

Scale items are divided into four areas: items 1-6 involve 'Awareness of the Environment' (min. 6; max. 30 points); items 7-10 relate to 'Bad Experiences in Intensive Care' (min. 4; max. 20 points); items 11-14 are about 'Memories of Bad Experiences in Intensive Care' (min. 4; max. 20 points); and, items 15-19 relate to 'Positive Feelings about Care in the Intensive Care Unit' (min. 5; max. 25 points). Low scores indicate negative experiences whereas higher scores showed that the experiences were positive.[16] Adaptation for use in Turkey was performed by Demir et al.[16] Permission to carry out the study was obtained from the Ethics Committee of Ege University College of Nursing, the College of Health, where the study was conducted. Verbal informed consent was obtained from the participants.

Data was analysed using SPSS version 11.5. As scale scores showed normal distribution according to Komogorov-Smirnov evaluation (Z=0.081, p<0.235), parametric tests, independent samples t-test and one-way analysis of variance (ANOVA) test were used. The significance level was set at p<0.05.

Results

The average age of study participants was 54.48±17.68 years; females comprised 97 (61.4%) of the study sample; 81 (51.3%) had at least secondary education; and 125 (79.4%) were married. Of the total, 100 (63.3%) of the patients stayed in the ICU for 8-15 days; 41 (25.9%) required mechanical ventilation support; and 112 (71.5%) experienced pain while in the ICU.

Table-1: Intensive Care Experience Scale (ICES) score and distribution of sub-dimensions points.

ICES and sub-dimensions	Average± SD Score	Min-Max
Total	54.67±10.72	27-75
Awareness of the environment	16.51±6.69	6-30
Bad experiences in intensive care unit	15.63±3.41	7-20
Memories of bad experiences in intensive care	13.27±2.77	7-22
Positive feelings about care in the intensive care unit	9.25±3.78	4-19

SD= Standard Deviation.

Table-2: Distribution of the patients' ICES average points in terms of the presence of pain.

ICES and sub-dimensions	Presence of Pain (Ort.± SD**)		t- and p- values
	Pain was present (n=113)	Pain was absent (n=45)	
Total	51.08±9.99	62.72 ±9.55	t= 5,964 p<0.043*
Awareness of the environment	15.95±6.96	18.54±6.35	t= 2,959 p< 0.034*
Bad experiences in intensive care unit	16.73±2.77	14.19±3.55	t= 2,601 p< 0.013*
Memories of bad experiences in intensive care	10.34±3.33	11.09±2.52	t= 5.052 p< 0.026*
Positive feelings about care in the intensive care unit	12.68±2.93	7.88±3.17	t= 0.288 p< 0.592

*p<0.05. **SD= Standard Deviation.
ICES: Intensive care experience scale.

Table-3: Distribution of ICES Average Scores By Sociodemographic and Medical Factors.

Sociodemographic Characteristic or Medical Factors	N	Awareness of the environment X±SD**	Bad experiences in ICU X±SD**	Memories of bad experiences in Intensive Care X±SD**	Positive feelings about care in the Intensive Care Unit X±SD**	Total
Age						
22-45y	42	17.40±7.24	15.78±3.43	12.80±2.52	9.33±3.99	55.33±10.61
46-65y	56	15.19±6.23	15.83±3.66	13.28±2.79	9.55±3.82	53.87±11.05
65y and over	60	17.13±6.61	15.33±3.19	13.58±2.93	8.91±3.62	54.67±10.72
		F=1.731	F=0.372	F=0.958	F=0.420	F=0.254
		p<0.180	p<0.690	p<0.386	p<0.658	p<0.776
Sex						
Female	97	16.50±6.51	16.20±3.17	12.95±2.57	9.23±3.33	52.78±9.41
Male	61	16.54±7.01	14.72±3.61	13.77±3.02	9.27±4.43	45.76±15.61
		t=0.033	t=2.633	t=1.800	t=0.067	t=2.765
		p<0.735	p<0.010*	p<0.074	p<0.974	p<0.020*
Length of stay in Intensive Care						
1-7 days	39	17.71±6.12	16.33±3.47	13.28±2.95	10.15±3.27	57.48±10.06
8-15 days	10	16.42±7.02	14.10±3.01	13.06±2.60	8.88±3.89	53.50±10.91
16 days or more	19	14.57±5.67	13.78±3.42	13.36±3.20	9.36±4.04	55.10±10.47
		F=1.444	F=3.250	F=1.787	F=1.611	F=1.979
		p<0.239	p<0.041*	p<0.171	p<0.203	p<0.142
Needed Mechanical Ventilation Support (MVS)						
Yes	41	13.48±619	15.39±3.88	13.12±3.11	8.51±4.38	51.51±11.51
No	117	17.23±6.73	15.71±3.25	13.32±2.66	9.51±3.53	55.78±10.25
		t=2.289	t=0.527	t=0.401	t=1.462	t=2.102
		p<0.023*	p<0.599	p<0.689	p<0.146	p<0.028*

*p<0.05. **SD=Standard Deviation.
ICU: Intensive care unit. ICES: Intensive care experience scale.

In terms of scale distribution, 51 (32.2%) were aware of the environment; 52 (33%) had bad ICU experiences; 35 (22.1%) remembered the bad experience; and 20 (12.7%) had positive ICU experiences. Table-1 shows the Intensive Care Experience Scale scores and distribution of sub-group points. Although the maximum total points for the ICES equals 95, the average score for this study was 54.67±10.72.

A total of 113 (71.5%) patients stated that they had experienced pain during ICU stay, while 45 (28.5%) stated that they hadn't experienced pain. ICES average scores were next examined in terms of whether the patient experienced pain (Table-2). Total scores were higher in the group having pain (average score 51.08±9.99) than for the other group (average score, 62.72±9.55); this was a statistically significant difference (p<0.05). Average scores for the subscale 'Positive Feelings about Care in the Intensive Care Unit'in those who reported pain was 12.68±2.93, a considerably higher score than the same subscale for those who reported no pain (average score 7.88±3.17).

Analysis according to the length of ICU stay revealed a statistically meaningful difference only for the 'Bad experiences in Intensive Care' subscale (p<0.05). Patients staying in intensive care for 1-7 days had significantly more positive experiences than those with longer stays (Table-3). Further, for those who received Mechanical Ventilation Support (MVS), ICES average scores were significantly higher (average score 51.51±11.51) than those who did not undergo MVS (average score 55.78±10.25) (p<0.05). MVS scores were higher for the subscale 'Awareness of the environment' in the group receiving MVS (p<0.05).

When analyses were carried out regarding the relationship between average scores and patient age or gender, only gender showed a statistically meaningful difference (p<0.02).

Overall, 52 (33%) patients had bad experience during ICU, while another 113 (71.5%) reported pain.

Discussion

In this study, the patients averaged 54.67±10.72 points on the ICES. Although there is no breakpoint for such evaluations, directionality in these findings indicates that ICU experiences of patients were mostly

negative. The results are similar to those reported by other studies.[8,10,13,17,18] Löf et al. noted that most patients defined their intensive care experiences as 'traumatic', 'persecutory' 'scary', and 'horrible'.[19] Karlsson and Forsberg, reported that the patients defined their intensive care experiences as 'miserable'[20] In published findings, positive experiences about intensive care were mostly explained by excellence in nursing care and high qualification of the nursing staff.[9,21]

In our study, 71.5% patients reported pain. Puntillo et al. stated that 40% patients had pain and 87% defined the pain as a disturbing experience that changed from 'moderate' to 'severe' during the ICU stay.[22] Pain commonly experienced by intensive care patients ranged from dull to severe; findings that are in agreement with the present study.[23,24]

We found patients reporting pain had more negative experiences compared to patients not reporting pain. Besides, patients in pain were less aware of the environment. This finding is in agreement with other studies. Engström and Söderberg reported that patients who were exposed to painful treatments and experienced pain described the intensive care environment as 'a horrible place.[17] In the present study, patients having pain remembered the ICU experience less than patients reporting no pain, meaning that patients in pain remembered their ICU experience more negatively than those not in pain. It is possible that patients having pain in ICU were less aware of the environment, possibly because pain may have emotional negative consequences such as hallucination and nightmares. Lof et al. determined that patients in 'unreal' emotional situations such as that seen when experiencing pain, remembered events more negatively after leaving intensive care and tended to remember mainly the bad experiences.[19]

In the present study, patients who stayed in intensive care for 1-7 days had significantly more positive experiences than patients who stayed longer. In previous studies, longer periods of stay in ICU also affected the patients' experiences negatively.[5,9,10,25] We found that scores decreased as the length of ICU stay increased; a result in accordance with the literature.[10]

Interestingly, age did not affect the ICU experiences. In the current study, women had more positive ICU experiences than men. Rotondi et al. found that patients' intensive care experiences did not vary according to age, gender, level of education and marital status.[8] It may be reasoned that women may be more able to cope with the stress arising from daily living or chronic stress better, and thus may have an improved ability to deal with the stressors of intensive care. This may explain the findings about gender differences in this study.

Limitations of the present study included the fact that the data collected cannot be generalised beyond the hospital in which the study was carried out. Also, using the specific scale for determining the patients' ICU experience limited the patients' answers to the pre-set responses. Also, limited sample may have affected the impact size. While interpreting the results, small sample size and the limitations cited above should be taken into consideration.

Conclusion

ICU staff must consider stressors that arise simply from being in intensive care; and must provide adequate orientation to the ICU environment in order to enable the patients to focus on the healing processes. Patients should be supported through planned symptom management practices to make their ICU experiences less negative.

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