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The Effect of Environmental Stressors on Patient Experience in Medical, Surgical, and COVID-19 Intensive Care Unit

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Abstract

This study was conducted to evaluate the effects of environmental stressors on patients' intensive care experiences in medical, surgical, and COVID-19 intensive care units (ICUs). The sample group consisted of 231 patients hospitalized in medical and surgical ICUs and agreed to participate in the study. The data analysis was performed with IBM SPSS Statistics 25. The average age of the patients was 53.67 ± 13.3, 55.4% were male, 47.6% were high school graduates, and 45.5% were followed up in the COVID-19 ICU. It was also found that there was a negative and moderate degree of correlation between the Intensive Care Experience Scale (ICES) and the Intensive Care Unit Environmental Stressors Scale (ICUESS). Environmental stressors in ICUs are associated with patient experiences. It is clear that ICU stressors create a negative perception in the patient and this situation is emotionally exhausting.

Keywords

COVID-19, environment, intensive care units, patient experience, stressor

Introduction

Intensive care units (ICUs) are stressful environments for patients. Studies have reported that patients followed up in ICUs are exposed to high levels of stress (1,2). The influence of constant light exposure in ICUs, the proximity of the patient beds, the hasty attitudes of nurses, frequent waking of patients for various interventions, loud talking, death of other patients, crying and moaning of painful patients, and sleep disturbances are stressors (1,3). These interrelated environmental stressors negatively affect patients' intensive care experience (4,5).

Factors causing stress in the ICU lead to the emergence of sensory changes such as sensory overload, sensory deprivation, and perceptual deprivation in patients and the development of Intensive Care Syndrome (6,7). Physiological problems caused by stress include tachypnea, high blood pressure, hypothermia, vasoconstriction, increased sympathetic nerve activity, and decreased tissue perfusion (8). Sedatives and opioids used to control stress cause respiratory depression and impaired consciousness (9–11). In addition to these problems, problems such as insomnia and disorientation of time and place may occur in patients hospitalized in ICUs (3). The stress and related disorders experienced by patients in the ICU may have a negative effect on the health of the individual, causing the patient to prolong the healing process and increase the duration of hospital stay.

COVID-19, which causes severe acute respiratory syndrome, is a deadly disease that emerged in Wuhan, China toward the end of 2019, caused a global pandemic and continues to feel its overwhelming effects (12–14). Although various vaccines have been produced, the number of patients treated in intensive care is substantial. Studies on the experience of patients in intensive care are limited. ICU patients have to face a difficult and stressful process when they least expect it. The injuries inflicted on the soul and body of the physical and psychological difficulties of staying in the ICU are often not noticed. The patient faces these challenges alone and most patients cannot forget the ICU experience. We wanted to determine the level of negativity of the ICU experience, in

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addition to reveal the relationship between the negative ICU experience and the severity of environmental stressors. This study was conducted to evaluate the effects of environmental stressors on patients' intensive care experiences in medical, surgical, and COVID-19 ICUs.

Materials and Methods

Research Design and Participants

This study was conducted in a descriptive, cross-sectional, and correlational type. This study was conducted as a single-center and prospective study. Face-to-face interviews and questionnaire methods were used in data collection. The universe of the study consisted of patients hospitalized in 3 medical (2 units are used for COVID-19 patients) and 2 surgical ICUs with 30 beds in a training and research hospital in Istanbul. After the power analysis, the participation of at least n = 90 patients with a 0.05 margin of error and 95% confidence interval was considered appropriate. The data was collected between November 15 and December 10, 2020.

The study was conducted using purposeful sampling techniques with the participation of n = 231 intensive care patients who agreed to participate and were in compliance with the inclusion criteria. The data were collected by the researchers using face-to-face interviews at the ICU. The data collection form was read to the patients and the answers given were marked on the form by the researcher and recorded.

Inclusion Criteria

(i) Being in a medical and/or surgical and/or COVID-19 ICU.
(ii) Being 18 years or older.
(iii) The length of stay in the ICU is at least 5 days.
(iv) Conscious patients who have completed the intubation process and are extubated.
(v) Not taking sedatives.
(vi) Not having any communication barriers.

Exclusion Criteria

(i) Staying in the ICU has ended, being followed out of the ICU in the clinic or at home.
(ii) Be 18 years old or younger.
(iii) Length of stay in the ICU is less than 5 days.
(iv) Intubated patients.
(v) Taking sedating medication.
(vi) Presence of communication and language barriers.

Data Collection Method and Tools

In data collection, Personal Information Form, which was created by taking expert opinion, Intensive Care Unit Environmental Stressors Scale (ICUESS) and Intensive Care Experience Scale (ICES) were used. Information on data collection tools is presented below.

Personal Information Form

This form, which was developed in line with the literature, consists of 11 questions in which the age, gender, marital status, unit of work, and employment period of ICU patients are questioned.

Intensive Care Unit Environmental Stressors Scale

ICUESS was developed by Ballard in the United States in 1981 (15), revised by Cochran and Ganong in 1989 (16), and its validity and reliability studies were carried out by Aslan in Turkey in 2010 (17). This is a 42-item Likert-type scale. Each question in the scale was assessed as (i) not stressful; (ii) mildly stressful; (iii) very stressful; or (iv) extremely stressful. The answers given are summed up and the total score of the ICUESS is obtained.

In the case of two groups in comparison of quantitative data, the lowest score on the scale is 42 and the highest score is 168 in the comparison of parameters between groups. The higher the scale score, the higher the stress level. Cronbach's alpha coefficient for internal consistency in the scale is 0.94 (17). In our study, Cronbach's alpha coefficient was determined as 0.91.

Intensive Care Experience Scale

ICES was developed by Rattray et al. in 2004 to evaluate the experiences of intensive care patients (18). The validity and reliability of ICES in Turkish were established by Demir et al. (19). The Cronbach's alpha coefficient of the scale was reported to be 0.79. It consists of a 5-point Likert scale with 19 items.

The ICES consists of four subdimensions, that is, awareness of the environment (first subdimension), bad experiences in ICU (second subdimension), memories of bad experiences in intensive care (third subdimension), and positive feelings about care in the ICU (fourth subdimension). A total of four of the items in the scale are scored in reverse. The minimum score that can be obtained from the scale is 19 points, and the maximum score is 95 points. The score range of the subdimensions of the scale is as follows: 6–30 in the first sub-dimension, 4–20 in the second and third dimensions and 5–25 in the fourth sub-dimension. The condition of the patients with low scores on the scale is evaluated as their consciousness is not clear enough and their experiences in the ICU are negative. The condition of the patients with high scores on the scale is evaluated as high awareness, good patient experiences, and high satisfaction (20). Cronbach's alpha coefficient of the ICES in this study was found as 0.81.

Statistical Analysis

Before the analysis, the normal distribution of the data was examined with the Kolmogorov–Smirnov test and it was found that it showed a normal distribution. Independent samples *t*-test was used for independent samples. In comparison of quantitative data, in case of more than two groups, one-way analysis of variance (ANOVA) test was used for intergroup comparisons of parameters, and Scheffe's test was used as a complementary post hoc analysis to determine differences after the ANOVA test. The results were evaluated at 95% confidence interval and $P < .05$ significance level.

Results

Characteristics of the patients and comparisons of the mean ICES and ICUESS scores are included in Table 1. According to the data obtained in this study, the average age of the patients was determined as 53.67 ± 13.3, and 29.4% of them were between the ages of 51 and 60 years. It was found that 55.4% of the patients were male, 47.6% were high school graduates, and 45.5% were followed in the COVID-19 ICU.

As a result of the one-way ANOVA performed to determine whether the mean scores of the ICES and its subdimensions differ significantly according to age and education variable, the difference between the group averages was not found statistically significant ($P > .05$ (Table 1).

In Table 2, the characteristics of the patients and the mean ICUESS scores are compared. The difference between the group averages of the *t*-test and the mean ICUESS total score according to the patients' analgesic usage was found to be statistically significant ($P < .05$).

Table 3 includes the characteristics of the patients and the correlation analysis between the ICUESS and ICES. In the correlation analysis, it was found that there was a negative and moderate degree of correlation between ICES and ICUESS ($r = -0.372$, $P = .000$).

Regression analyzes, ICUESS were found to be statistically significant ($P < .01$) on the ICES ($\beta = .373$, $r^2 = 0.139$ $P < .01$), "Bad Experiences in Intensive Care Unit" subdimension ($\beta = .399$, $r^2 = 0.115$, $P < .01$) and "Memories of Bad Experiences in Intensive Care" subdimension ($\beta = .198$, $r^2 = 0.003$, $P < .05$) (Table 4).

Discussion

In this study, in which the relationship between environmental stressors and intensive care experience of medical and surgical ICU patients was examined, it was determined that the mean ICUESS score was 143 ± 4.71 (min: 125, max: 154) and the mean ICES score was 60.40 ± 2.65 (min: 54, max: 68). Environmental stressors that patients are exposed to in ICUs were found to affect intensive care experiences by 13.9% ($\beta = -.373$, $r^2 = 0.139$, $P < .01$) and the "Bad Experiences in Intensive Care Unit" sub-dimension by 11.5% ($\beta = .399$, $r^2 = 0.115$, $P < .01$).

Catheters, drains, noninvasive and invasive ventilation methods, treatment and care interventions, aspirations, dressing changes, position changes, and rehabilitation practices used in ICUs can be counted among the factors that cause stress in patients. Noise, insomnia, pain, inability to communicate, lack of family support, the presence of various tubes, and lines are the factors that create stress in patients. ICUESS measured the severity of the stress created by all these factors. Stress expresses negativity, while experience can be positive or negative (15). While the stress felt in the ICU creates a negative experience, low or manageable stress can lead to compliance of care and a positive experience. With ICES, we determined what kind of experience the patients had in the ICU (18). In our study, environmental stressors were found to be effective in negating intensive care experiences. Good care provided in the hospital, gradual recovery, and meeting patient expectations are the factors that make the ICU experience positive. In our study, a high experience score may be associated with patient satisfaction. In our study, the ICES score of COVID-19 patients was found to be higher than the patients hospitalized in the medical and surgical ICU. In the environmental awareness subdimension, the score of COVID-19 patients was higher. The environmental stressors they perceived were the same as in the other patients.

According to the variable of dependence on oxygen, a significant difference was found for the "Bad Experiences in Intensive Care Unit", which is the subdimension of the scale. It was determined that the difference was due to the high mean scores of those answering no ($P < .05$). In a study conducted in the cardiovascular surgery ICU, it was determined that the total ICUESS mean score was 86.70 ± 2.73 (21). In addition, in a study conducted in the Reanimation ICU, it was determined that the total ICUESS mean score was 69.26 ± 21.84 (22).

Although there is no cut-off point when interpreting and evaluating the ICUESS score, it is seen that the results obtained in this study are higher in the environmental stressor scale scores of the patients compared to other studies. ICUs are extremely risky units. However, it is possible to predict that the fear of death is a stimulus due to the COVID-19 pandemic that has now affected the world and affects the high score in ICUESS. After all, ICUs are units with the closest risk to death. In these units, the stress level is high, and this situation affects the patient experiences.

In this study, the length of stay in the ICU was calculated as 31.8 ± 6.95. In the literature reviews, it was found that mild stress starts in patients before the surgery, and it reaches a serious level in a few days after the surgery, and the stress symptoms continue for up to 3 months (23,24). In this study, there were 42.8% surgical patients. This patient group was also at risk in terms of stress after intensive care.

Stress is defined as the physical, emotional, social, and mental adaptation process of reactions to the effects of the

Table 1. Characteristics of the Patients and Comparisons of the Mean ICES and ICUESS Scores (n = 231).

Features	n	%	Awareness of the environment	Bad experiences in intensive care unit	Memories of bad experiences in intensive care	Positive feelings about care in the intensive care unit	ICES total score	ICUESS total score
Age			Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
18–28	11	4.77	17.81 ± 2.27	13.54 ± 1.35	12.45 ± 1.57	16.27 ± 1.00	60.09 ± 3.17	143.54 ± 4.67
29–39	27	11.7	17.92 ± 1.46	13.92 ± 1.32	12.29 ± 1.03	25.74 ± 1.53	59.88 ± 2.79	14.55 ± 5.11
40–50	55	23.8	18.14 ± 1.48	13.52 ± 1.39	15.52 ± 1.50	15.85 ± 1.35	60.05 ± 2.42	142.14 ± 3.91
51–61	68	29.43	18.42 ± 1.58	13.98 ± 1.02	12.70 ± 1.27	15.85 ± 1.62	60.97 ± 2.74	143.89 ± 4.33
60 and above	70	30.3	18.28 ± 1.49	13.88 ± 1.18	12.54 ± 1.27	15.67 ± 1.49	60.38 ± 2.55	143.04 ± 5.34
F			0.782	1.369	0.505	0.458	1.317	1.658
P			.538	.246	.732	.766	.264	.161
Gender			Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Female	103	44.6	18,13 ± 1.14	13.79 ± 1.21	12.56 ± 1.29	15.87 ± 1.37	60.36 ± 2.42	142.96 ± 5.06
Male	128	55.4	18.30 ± 1.66	13.83 ± 1.21	12.54 ± 1.33	15.75 ± 1.56	60.43 ± 2.83	143.53 ± 4.40
t			−833	0.248	0.093	0.631	0.195	0.927
P			.406	.803	.905	.172	.184	.281
Education			Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Literate	12	5.2	17.66 ± 1.07	13.16 ± 1.40	13.33 ± 2.10	15.91 ± 1.31	60.08 ± 1.97	143.66 ± 5.41
Primary education	60	26	18.03 ± 1.35	13.70 ± 1.25	12.58 ± 1.45	15.48 ± 1.93	59.80 ± 2.92	143.45 ± 4.18
High school	110	47.6	18.21 ± 1.71	13.88 ± 1.19	12.53 ± 1.09	15.92 ± 1.30	60.56 ± 2.65	142.62 ± 4.85
Associate degree and above	49	21.2	18.63 ± 1.46	13.97 ± 1.12	12.36 ± 1.31	15.89 ± 1.21	15.89 ± 1.21	144.44 ± 4.69
F			1.964	1.751	1.771	1.286	1.769	1.783
P			.120	.157	.153	.280	.151	.151
ICU type			Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Medical	27	11.7	16.51 ± 1.55	14.11 ± 1.21	12.74 ± 1.25	15.88 ± 1.69	59.25 ± 3.27	144.40 ± 4.85
Surgical	99	42.8	18.09 ± 1.31	13.65 ± 1.27	12.63 ± 1.40	13.82 ± 1.50	60.21 ± 2.64	143.25 ± 4.77
COVID-19	105	45.5	18.80 ± 1.42	13.89 ± 1.14	12.42 ± 1.23	15.76 ± 1.41	60.88 ± 2.37	143.01 ± 4.60
F			29.710	1.893	0.945	0.099	4.655	0.936
P			.000*	.153	.390	.906	.010*	.394
Post hoc			3 > 1,3 > 2, (*P* < .05)				3 > 1,3 > 2, (*P* < .05)	144.40 ± 4.85
Oxygen-dependent			Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Yes	134	58	18.26 ± 1.51	13.67 ± 1.25	12.64 ± 1.27	15.86 ± 1.47	60.41 ± 2.64	143.31 ± 4.90
No	96	42	18.21 ± 1.59	14.01 ± 1.13	12.47 ± 1.36	15.70 ± 1.50	60.41 ± 2.67	143.28 ± 4.44
t			0.205	2.053	0.510	0.793	0.004	0.51
P			.838	.041*	.452	.428	.997	.337
Analgesic usage			Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Yes	105	45.5	18.25 ± 1.38	13.67 ± 1.22	12.43 ± 1.35	15.55 ± 1.44	59.92 ± 2.47	143.25 ± 4.87
No	126	54.5	18.20 ± 1.69	13.93 ± 1.19	12.65 ± 1.27	16.01 ± 1.48	60.80 ± 2.73	143.36 ± 4.16

(continued)

Table 1. (continued)

Features	n	%	Awareness of the environment	Bad experiences in intensive care unit	Memories of bad experiences in intensive care	Positive feelings about care in the intensive care unit	ICES total score	ICUESS total score
t			0.251	1.630	1.226	2.393	2.559	2.689
p			.802	.104	.221	.018*	.011*	.008**
Other medications			Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Yes	176	76.2	18.18 ± 1.62	13.81 ± 1.25	12.48 ± 1.32	15.38 ± 1.44	60.32 ± 2.60	143.25 ± 4.87
No	55	23.8	18.38 ± 1.31	13.81 ± 1.09	12.76 ± 1.27	15.70 ± 1.59	60.67 ± 2.79	143.36 ± 4.16
t			0.832	2.741	2395	1.383	0.551	0.148
P			.407	.914	.000*	.170	.582	.882
CVC			Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Yes	133	57.6	18.27 ± 1.60	13.81 ± 1.26	12.51 ± 1.25	15.75 ± 1.52	60.34 ± 2.68	143.12 ± 4.78
No	98	42.4	18.17 ± 1.49	13.82 ± 1.14	12.61 ± 1.39	15.87 ± 1.42	60.48 ± 2.61	143.48 ± 4.62
t			0.468	0.90	0.576	0.637	0.407	0.577
P			.640	.929	.565	.525	.684	.565
Averages				Mean ± SD			Min	Max
Age (years)				53.67 ± 13.3			18	71
ICU length of stay (days)				31.80 ± 6.95			4	104
Duration of intubation (days)				23.58 ± 6.33			3	109
Days to use sedative medication				18.58 ± 5.33			2	96
Enteral tube feeding duration (days)				24.76 ± 6.4			3	98

Note: ICU = intensive care unit; ICES = Intensive Care Experience Scale; ICUESS = Intensive Care Unit Environmental Stressors Scale; F = one-way analysis of variance; SD = standard deviation, *t* = *t*-test.
*$P < .05$, **$P < .01$

Table 2. Average Scores Obtained From ICES and its Subdimensions and ICUESS (n = 231).

Scales	n	Items[a]	Score Range	Mean ± SD	Min	Max
ICES total score	231	1–19	19–95	60.40 ± 2.65	54.00	68.00
ICES awareness of the environment score	231	1, 2, 3, 4, 5, 6	6–30	18.22 ± 1.56	14.00	22.00
ICES bad experiences in intensive care unit score	231	7, 8, 9, 10	4–20	13.81 ± 1.21	11.00	16.00
ICES memories of bad experiences in intensive care score	231	15, 16, 17, 18, 19	5–20	12.55 ± 1.31	9.00	16.00
ICES positive feelings about care in the intensive care unit	231	11, 12, 13, 14	4–20	15.80 ± 1.48	11.00	19.00
ICUESS total score	231	1–42	42168	143.28 ± 4.71	125.00	154.00

Note: [a]Items 7, 8, 9, 10, 15, and 17 are reverse scored. ICES = Intensive Care Experience Scale; ICUESS = Intensive Care Unit Environmental Stressors Scale; SD = standard deviation.

Table 3. Characteristics and the Correlation Analysis Between the ICUESS and ICES (n = 231).

	Age		ICU length of stay		Duration of intubation		Days to use sedative medication		Enteral tube feeding duration		ICUESS total score		ICES total score	
	r	*P*	r	*P*	r	*P*	r	*P*	r	*P*	r	*P*	r	*P*
Age	1	-	.094	.155	−.073	.271	.073	.271	−.112	.091	.088	.184	−.039	.555
ICU length of stay	−.094	.155	1	-	.664	.000	664	.000	.639	.000	−.046	.490	.094	.156
Duration of intubation	−.073	.271	664	.000	1	-	1	.000	.960	.000	.020	.764	−.006	.933
Days to use sedative medication	−.073	.271	664	.000	1	.000	1	-	.960	.000	.020	.764	−.006	933
Enteral tube feeding duration	−.112	.091	.639	.000	.960	.000	.960	.000	1	-	.005	.944	.025	.705
ICUESS total score	.088	.184	−.046	.490	.020	.764	.020	.764	.005	.944	1	-	−.373	.000
ICES total score	−.039	.555	.094	.156	−.006	.933	.006	.933	.025	.705	.373	.000	1	-

Note: ICU = intensive care unit; ICES = Intensive Care Experience Scale; ICUESS = Intensive Care Unit Environmental Stressors Scale; r = Pearson's correlation coefficient.
*$P < .05$, **$P < .01$..

Table 4. Characteristics and the Regression Analysis Between the ICUESS and ICES (n = 231).

Analyze	Independent variables	Dependent variables	Standardized beta (β)	Sig.	Adjusted R square	F value
Regression	ICUESS	ICES	.373	.000**	.139	36.926
		Awareness of the environment	.127	.054	.012	3.757
		Bad experiences in Intensive Care Unit	.399	.000**	.115	43.309
		Memories of bad experiences in Intensive Care	.198	.002**	.035	9.362
		Positive feelings about care in the Intensive Care Unit	.031	.640	.003	.220

Note: ICES = Intensive Care Experience Scale; ICUESS = Intensive Care Unit Environmental Stressors Scale; Sig. = significance.
: $P < .05$, **: $P < .01$.

interaction of individuals and the world they live in. The destructive effect of stress increases as its level increases. Accordingly, although it is known that low-level stress motivates and has positive effects, there are studies stating that people exposed to serious stress cannot cope with the idea of "having a serious illness" with the effect of their past knowledge and experience, and they undergo a "feeling of suffocation" (15,23,24).

In our study, as a result of the one-way ANOVA performed to determine whether the mean scores of the ICES and its subdimensions show a significant difference according to age and education variable, the difference between the group averages was not found statistically significant ($P > .05$). In the literature, it has been found that as the education level decreases, the stress caused by environmental stimuli increases (25). Post-traumatic stress disorder (PTSD) was correlated with patients who were mechanically ventilated after discharge from the ICU. In the same study, 14% of the patients were diagnosed with PTSD 3 months after discharge (26).

It was determined that there was a positive and strong ($r = 0.664$, $P = .000$) correlation between the length of stay in the ICU patients and the duration of intubation, and a positive and strong correlation ($r = 0.639$, $P = .000$) with the presence

of the enteral tube. In a previous study, it was stated that the intubation tube is the most important stressor in terms of the need for continuous aspiration, the patient's inability to close his mouth, and the need to suck the tube (25).

The results obtained in our study support the results of the literature. However, the data we obtained in terms of the small number of studies conducted in the COVID-19 ICU and the subject of our study is unique. Ultimately, according to the diagnosis of patients admitted to the ICU, the difference between awareness of the environment, memories of bad experiences in intensive care, scale total score, and group averages were found to be statistically significant ($P < .05$). As a result of the post hoc analysis, it was determined that the difference was due to the higher average score of patients hospitalized with a diagnosis of COVID-19 compared to others. Environmental stressor scores may have been found to be higher than at other times, as the COVID-19 pandemic process in which our study was conducted created extra stress in patients. Our study is single center. The variables of satisfaction, pain, and anxiety, which are effective in increasing the patient experience, were not controlled. All this was accepted as a principle of limitation. The fact that the data of the study was collected during the COVID-19 process has an important place in the fact that ICU patients are exposed to high stress. This study gives an idea that the patient experience can be positive despite high stress. Our work will pave the way for future studies to reduce stress and turn experiences into positive ones.

Conclusion

The experiences of intensive care patients are affected by the environmental stressors in the ICU. In line with the data obtained from this study, health care professionals should perform good stress management, management of complications due to diseases and adverse events, taking into account patients' environmental perceptions, sociodemographic characteristics, reactions, social support systems, educational needs, and past medical history. Taking these parameters into consideration, the general condition of the patients should be evaluated well. It is of great importance to organize the patient's environment according to stressors, to take precautions, and to manage pain. It is very important to evaluate the needs of intubated patients frequently, to sedate them appropriately by considering the physician's recommendations, and to relieve their pain. It is necessary to conduct experimental and controlled studies examining similar problems on the subject and to determine preventive interventions. Although the scales we used in our study do not seem ergonomic in clinical use due to the extra labor, cost, and time requirement, the findings of our study are an important source of information in terms of raising awareness among ICU staff.

Declaration of Conflicting Interests

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Ethics Approval

Prior to the start of the study, the requisite legal approvals were obtained from Istanbul Sabahattin Zaim University Ethics Committee (Decision No: 20292139-050.01.04). The Volunteer Information Form was read by the researcher by informing the patients about the research in compliance with the Declaration of Helsinki. Patients volunteering to take part in the study were included in the study after their verbal and written consent was obtained.

Consent for Publication

Not applicable.

Availability of Data and Materials

The data have analyzed during the current study are available from the corresponding author on reasonable request.

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