

# Perceptions of adult intensive care unit patients regarding nursing presence and their intensive care experiences: A descriptive-correlational study

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## Abstract

**Aims and Objectives:** This study aims to determine the relationship between perceptions of nursing presence and intensive care experiences in adult intensive care unit patients'.

**Background:** Intensive care units (ICUs) are settings where patients have many negative emotions and experiences, which affect both treatment and post-discharge outcomes. The holistic presence of nurses may help patients turn their negative emotions and experiences into positive ones.

**Design:** A descriptive-correlational design was used and reported according to the STROBE checklist.

**Methods:** The sample consisted of 182 participants. Data were collected using a personal information form, the Glasgow Coma Scale (GCS), the Intensive Care Experience Scale (ICES), and the Presence of Nursing Scale (PONS).

**Results:** A strong positive correlation existed between total ICES and PONS scores ( $r=0.889, p<0.001$ ). There was a strong positive correlation between PONS total score and ICES subscales (awareness of surroundings ( $r=0.751, p<0.001$ ), frightening experiences ( $r=0.770, p<0.001$ ), recall of experience ( $r=0.774, p<0.001$ ), and satisfaction with care ( $r=0.746, p<0.001$ )). Males ( $\beta=-0.139, p<0.05$ ), and patients who were university and higher education graduate ( $\beta=0.137, p<0.05$ ) had higher positive ICU experiences. It was also found length of ICU stay was correlated with ICU experiences and nursing presence.

**Conclusions:** The more positively the patients perceive nurses, the better ICU experiences they have. Gender and education level were found determinants of adult ICU patients' experiences. ICU length of stay predicted what kind of experience patients have and how much they feel the presence of nurses.

**Relevance to Clinical Practice:** Nurses should make their presence felt completely and holistically by using their communication skills for patients have more positive intensive care experiences. Nurses should consider variables which affects patients' ICU experiences and nursing presence.

## KEYWORDS

critical care, intensive care, patient experiences, perceptions of nursing presence

## 1 | INTRODUCTION AND BACKGROUND

Intensive care unit (ICU) patients are exposed to physical and emotional stressors. They experience environmental (noise, light, temperature, etc.), care-related (limited visiting hours, lack of communication, lack of privacy, limited mobility, etc.), and ICU therapy-related (mechanical ventilation, renal replacement therapy, painful procedures, etc.) problems (Kelly et al., 2014; Latour et al., 2022). Even after discharge, some ICU patients suffer from physical, psychological, cognitive, or social problems due to negative experiences. (Bakhrui et al., 2018; Chung et al., 2017; Heydon et al., 2020; Marra et al., 2018). Post-intensive care syndrome (PICS) is a disorder that occurs after discharge from an ICU (Yuan et al., 2021). Kawakami et al. (2021) reported that three out of five ICU patients suffer from PICS 6 months after discharge. Negative ICU experiences cause patients to suffer from PICS (Kawakami et al., 2021). The quality of nursing care affects the experiences of ICU patients. When nurses consider their patients' psychological well-being, communicate with them therapeutically, and approach them holistically, patients have better health outcomes (Hofhuis et al., 2008; O'Connell & Landers, 2008; Xu et al., 2021). In other words, the more positive attitudes nurses have and the more holistically they approach their ICU patients, the more positive experiences patients will have. A nurse's presence is more than just being physically present. Some ICU patients find it stressful that nurses are always around working (Akin & Aribogan, 2006). Through interaction, patients feel the presence of nurses (Kleiman, 2010; Paterson & Zderad, 2020). Nurses make their presence felt by emphasising their communication skills and practicing the art of nursing. Nurses who make their presence known care about the uniqueness of their patients and make them feel valued. They are also there for their patients and are sensitive to their subjective experiences (Penque & Kearney, 2015). Nurses who make their presence felt are those who voluntarily share their time and experiences with their patients. They allow their patients to find meaning in their experiences (Bozdogan Yesilot & Oz, 2016a).

Although there is a large body of research on the experiences of ICU patients, no researchers have addressed the nature of patients' ICU experiences when they perceive the presence of nurses. Therefore, this study to determine the relationship between perceptions of nursing presence and ICU experiences in ICU patients'. The research questions were as follows:

1. Which factors affect patients' perceptions of nursing presence and ICU experiences?
2. Is there a relationship between adult patients' perceptions of nursing presence and ICU experiences?

## 2 | METHODS

### 2.1 | Design and settings

This descriptive and correlational study was conducted in three ICUs (coronary, chest diseases and internal medicine intensive care)

### What does this paper contribute to the wider global community?

- Adult patients have positive ICU experiences and improvable perceptions of nursing presence.
- There was an association between patients' perceptions of nursing presence and ICU experiences.
- ICU length of stay was significant determinants both patients' ICU experiences and patients' of perceptions of nursing presence.

of a state city hospital in Turkey. These units where supportive treatments are performed (dialysis, hemofiltration, plasmapheresis and mechanical ventilation) due to single organ failure and where patients who need to be followed due to their underlying (severe, high risk) disease. The ICUs have total a 38-bed capacity. Nurse-to-patient ratio is 1:2 in these ICUs.

### 2.2 | Participants

While determining the sample size in the research, the test for the main hypothesis was determined at the first stage, and the required mean and standard deviation were obtained from the study was prepared by Bozdogan Yeşilot & Oz (2017) in literature which is compatible with our study. According to the power analysis, with 95% confidence level and  $\alpha=0.05$  margin of error, with an effect size of 0.5223240 and a tolerance ratio of 5%; in this study,  $p: 0.05$ , power of the test  $(1-\beta)$ : 95%,  $t=1.96$ , and in line with this information, it was concluded that minimum sample size for the study ( $n$ ) was 162 patients. Of 252 patients screened for eligibility between April and September 2022, 70 patients were excluded (56 having a Glasgow Coma Score of  $<15$ , 6 declined to participate, 4 did not speak Turkish, and 4 were illiterate), Therefore, the sample consisted of 182 patients who met the following inclusion criteria: (1) volunteering, (2) having been staying in one of the ICUs for at least 24 h, (3) being over 18 years of age, (4) having a Glasgow Coma Score of 15, (5) speaking Turkish, (6) being at least literate, (7) having no communication problems, and (8) having no mental problems. The study was reported according to the STROBE checklist seen as Appendix S1.

### 2.3 | Data collection

All patients were briefed about the research purpose and procedure. Informed consent was obtained from those who agreed to participate in the study. The data were collected using a personal information form, the Glasgow Coma Scale (GCS), the Intensive Care Experience Scale (ICES), and the Presence of Nursing Scale (PONS).

The researchers developed the personal information form. (Bozdogan Yesilot & Oz, 2016b; Bozdogan Yeşilot & Oz, 2017). The form consisted of eight items (age, gender, marital status, education, income, diagnosis, ICU length of stay, and having received nursing care before). The Glasgow Coma Scale (GCS) was developed by Teasdale and Jennett (1974) to assess the level of consciousness. The total score ranges from 3 (coma) to 15 (fully conscious). The scale assesses patients according to three aspects of responsiveness: eye-opening, motor, and verbal responses (Teasdale & Jennett, 1974). The Intensive Care Experience Scale (ICES) was developed by Rattray et al. (2004) and adapted to Turkish by Demir et al. (2009). The original scale consists of 24 items, while the Turkish version consists of 19 items. The items are rated on a five-point Likert-type scale. The scale has four subscales: awareness of surroundings, frightening experiences, recall of experience, and satisfaction with care. The total score ranges from 19 to 95, with higher scores indicating more positive ICU experiences. The Turkish version has a Cronbach's alpha of 0.79. The Presence of Nursing Scale (PONS) was developed by Kostovich et al. and adapted to Turkish by Bozdogan et al. The original scale consists of 28 items, while the Turkish version consists of 25 items. The items are rated on a five-point Likert-type scale ('1=Never', '2=Rarely', '3=Sometimes', '4=Often', and '5=Always'). The total score ranges from 24 to 120, with higher scores indicating more nursing presence. The Turkish version has a Cronbach's alpha of 0.96 (Bozdogan Yesilot & Oz, 2016a).

## 2.4 | Procedure

The data were collected face-to-face between April and September 2022. The researcher briefed all patients on the research purpose and procedure. She also told them that participation was voluntary and that they could withdraw from the study at any time. She obtained verbal and written consent from all patients who agreed to participate and met the inclusion criteria. It took each participant 20 min to fill out the data collection tools. The researcher kept the surveys in a locked cupboard and stored the data in a decrypted format. She assigned each participant a code for anonymity and confidentiality.

## 2.5 | Ethical consideration

The study was approved by Toros University Scientific Research and Publication Ethics Committee (Date: 25.03.2022 & Number: 68). Permission was obtained from the hospital. Informed consent was obtained from all participants.

## 2.6 | Data analysis

The data were analysed using the Statistical Package for Social Sciences (SPSS for Windows, v. 25.0) at a significance level of

0.05. The outcome variables of the study were perceptions of nursing presence and intensive care experiences. The explanatory variables were socio-demographic characteristics and clinical features. Mean and standard deviation was used for continuous variables, while frequency and percentage were used for categorical variables. The Kolmogorov-Smirnov test was used for normality testing. Independent samples *t*-test and one-way analysis of variance (ANOVA) were used for normally distributed data, while the Kruskal-Wallis tests were used for non-normally distributed data. There were no missing data. The Bonferroni test was used for post-hoc comparisons. Multiple linear regression analysis was used to determine how well the explanatory variables predicted the outcome variables. Variables with significant differences were tested in the model. Pearson's correlation coefficient was used to determine the relationship between scale scores.

## 3 | RESULTS

More than half of the participants were women (61%) and between the ages of 40 and 59 (50.6%). More than half of the participants had primary or middle school degrees (65.4%) and an equal income (income=expense) (52.2%). Over half of the participants were treated in the coronary ICU (52.3%). Most participants had been in the ICUs for 1-3 days (74.2%). More than half of the participants had never received nursing care before (64.3% Table 1).

Participants had a mean PONS and ICES score of  $88.68 \pm 25.60$  and  $71.11 \pm 14.35$ , respectively. They had mean ICES 'awareness of surroundings', 'frightening experiences', 'recall of experience', and 'satisfaction with care' subscale scores of  $21.88 \pm 5.49$ ,  $15.14 \pm 3.98$ ,  $15.23 \pm 3.93$ , and  $18.84 \pm 3.97$ , respectively.

Female participants had significantly lower mean total PONS and ICES scores than their male counterparts ( $p < 0.05$ ). Female participants also had significantly lower mean ICES 'frightening experiences' ( $p = 0.001$ ,  $d = 0.704$ ) and 'recall of experience' ( $p < 0.05$ ,  $d = 0.441$ ) subscale scores than their male counterparts. Education affected participants' total PONS ( $p = 0.016$ ,  $d = 0.219$ ) and ICES scores ( $p = 0.004$ ). Education also affected their ICES 'awareness of surroundings' ( $p = 0.019$ ,  $d = 0.214$ ), 'frightening experiences', and ( $p = 0.001$ ,  $d = 0.274$ ) 'recall of experience' ( $p = 0.001$ ,  $d = 0.282$ ) subscale scores. The post-hoc analysis showed that participants with bachelor's or higher degrees had a significantly higher mean total ICES score than those with high school or lower degrees ( $p < 0.05$ ). Participants staying in the ICUs for 1-3 days had significantly higher mean total PONS ( $p = 0.000$ ,  $d = -0.651$ ) and ICES scores ( $p = 0.000$ ,  $d = -1.018$ ) than those staying there for more than 3 days. Participants staying in the ICUs for 1-3 days had significantly higher mean ICES 'awareness of surroundings' ( $p = 0.000$ ,  $d = -1.018$ ), 'frightening experiences' ( $p = 0.000$ ,  $d = -0.844$ ), 'recall of experience' ( $p = 0.000$ ,  $d = -0.785$ ), and 'satisfaction with care' ( $p = 0.001$ ,  $d = -0.580$ ) subscale scores than those staying in the ICUs for more than 3 days (Table 1).

TABLE 1 The distribution of scale scores by sociodemographic characteristics and clinical features (n = 182).

Intensive care experience scale								
	n	%	Awareness of surroundings $\bar{X}$ (SD)	Frightening experiences $\bar{X}$ (SD)	Recall of experience $\bar{X}$ (SD)	Satisfaction with care $\bar{X}$ (SD)	Total score $\bar{X}$ (SD)	The presence of nursing scale $\bar{X}$ (SD)
<b>Age (year) (<math>\bar{x}</math>:53.61 ± 13.50)</b>								
18–39	31	17.0	22.38 (5.60)	14.12 (4.42)	14.38 (4.66)	18.12 (4.22)	69.03 (16.68)	81.96 (30.58)
40–59	92	50.6	21.98 (5.10)	15.50 (3.68)	15.57 (3.75)	18.84 (4.01)	71.91 (13.12)	90.69 (22.82)
≥60	59	32.4	21.45 (6.08)	15.13 (4.18)	15.15 (3.82)	19.22 (3.78)	70.96 (15.04)	89.08 (26.72)
<i>p</i>			0.725 <sup>b</sup>	0.255 <sup>b</sup>	0.343 <sup>b</sup>	0.467 <sup>b</sup>	0.627 <sup>b</sup>	0.259 <sup>b</sup>
<i>d</i>			0.059	0.119	0.105	0.091	0.069	0.116
<b>Gender</b>								
Female	71	61.0	21.19 (5.47)	13.52 (4.35)	14.28 (4.50)	18.33 (3.96)	67.33 (14.95)	83.04 (27.51)
Male	111	39.0	22.32 (5.49)	16.18 (3.36)	15.84 (3.42)	19.17 (3.96)	73.53 (13.48)	92.29 (23.74)
<i>p</i>			0.178 <sup>a</sup>	0.000 <sup>a</sup>	0.014 <sup>a</sup>	0.168 <sup>a</sup>	0.004 <sup>a</sup>	0.017 <sup>a</sup>
<i>d</i>			0.206	0.704	0.402	0.212	0.441	0.366
<b>Education status, median (IQR)</b>								
Primary school/middle school	94	51.6	23.00 (16–26) <sup>1</sup>	14.00 (12–18) <sup>1</sup>	15 (12–18) <sup>1</sup>	18 (15.75–22.25) <sup>1</sup>	67 (57–84) <sup>1</sup>	88 (64.5–112.25) <sup>1</sup>
High school	68	37.4	23 (17–25) <sup>2</sup>	15.5 (13–18) <sup>2</sup>	16 (13–18) <sup>2</sup>	18 (16–23) <sup>2</sup>	74 (59–82.75) <sup>2</sup>	96.5 (70.5–108.75) <sup>2</sup>
University and higher education	20	11.0	25 (23–29.75) <sup>3</sup>	20 (17–20) <sup>3</sup>	18 (16.5–20) <sup>3</sup>	20.5 (18.25–23) <sup>3</sup>	82.5 (79.25–85.75) <sup>3</sup>	106.5 (98–119.75) <sup>3</sup>
<i>p</i>			0.019 <sup>c</sup>	0.001 <sup>c</sup>	0.001 <sup>c</sup>	0.085 <sup>c</sup>	0.004 <sup>c</sup>	0.016 <sup>c</sup>
<i>d</i>			1, 2 < 3	1, 2 < 3	1, 2 < 3		1, 2 < 3	1, 2 < 3
			0.214	0.274	0.282	0.179	0.277	0.219
<b>Marital status</b>								
Single	63	34.6	21.71 (6.25)	15.50 (4.45)	15.95 (3.71)	19.15 (4.39)	72.33 (15.95)	91.73 (27.64)
Married	119	65.4	21.97 (5.08)	14.95 (3.72)	14.85 (4.02)	18.68 (3.74)	70.47 (13.47)	87.07 (24.43)
<i>p</i>			0.805 <sup>a</sup>	0.200 <sup>a</sup>	0.064 <sup>a</sup>	0.332 <sup>a</sup>	0.194 <sup>a</sup>	0.087 <sup>a</sup>
<i>d</i>			0.047	–0.138	–0.281	–0.118	–0.129	–0.182
<b>Income</b>								
Income < expense	66	36.3	22.39 (6.01)	15.19 (4.58)	15.40 (3.70)	19.24 (4.25)	72.24 (15.99)	89.93 (27.90)
Income = expense	95	52.2	21.17 (5.06)	15.18 (3.55)	14.92 (4.04)	18.60 (3.61)	69.89 (13.10)	88.47 (23.51)

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TABLE 1 (Continued)

			Intensive care experience scale					
			Awareness of surroundings	Frightening experiences	Recall of experience	Satisfaction with care	Total score	The presence of nursing scale
<i>n</i>	%		$\bar{X}$ (SD)	$\bar{X}$ (SD)	$\bar{X}$ (SD)	$\bar{X}$ (SD)	$\bar{X}$ (SD)	$\bar{X}$ (SD)
Income > expense	21	11.5	23.47 (5.46)	14.80 (4.01)	16.09 (4.17)	18.71 (4.69)	73.09 (14.58)	85.71 (28.14)
<i>p</i>			0.567 <sup>b</sup>	0.457 <sup>b</sup>	0.789 <sup>b</sup>	0.432 <sup>b</sup>	0.342 <sup>b</sup>	0.717 <sup>b</sup>
<i>d</i>			0.145	0.030	0.096	0.071	0.089	0.048
ICU								
Coronary	85	46.7	22.19 (5.35)	16.52 (3.62)	15.58 (3.51)	15.33 (3.72)	71.42 (13.39)	83.56 (24.09)
Chest diseases	37	20.3	23.32 (5.38)	15.18 (4.02)	14.86 (4.50)	17.17 (4.06)	73.63 (13.11)	87.49 (24.01)
Internal medicine	60	33.0	21.55 (5.71)	15.13 (4.48)	12.75 (4.21)	16.22 (4.18)	72.74 (15.84)	86.15 (27.74)
<i>p</i>			0.944 <sup>b</sup>	0.636 <sup>b</sup>	0.109 <sup>b</sup>	0.493 <sup>b</sup>	0.523 <sup>b</sup>	0.638 <sup>b</sup>
<i>d</i>			0.115	0.169	0.307	0.178	0.063	0.225
ICU length of stay (day)								
1–3	135	74.2	23.20 (4.90)	15.96 (3.72)	15.99 (3.78)	19.47 (3.86)	74.57 (13.41)	92.83 (24.84)
≥4	47	25.8	18.08 (5.39)	12.80 (3.82)	13.06 (3.59)	17.23 (3.88)	61.19 (12.31)	76.76 (24.20)
<i>p</i>			0.000 <sup>a</sup>	0.000 <sup>a</sup>	0.000 <sup>a</sup>	0.001 <sup>a</sup>	0.000 <sup>a</sup>	0.000 <sup>a</sup>
<i>d</i>			-1.018	-0.844	-0.785	-0.580	-1.018	-0.651
Receiving nursing care before								
Yes	65	35.7	22.01 (4.95)	15.40 (4.61)	14.69 (4.39)	19.09 (4.28)	71.17 (16.32)	91.03 (26.96)
No	117	64.3	21.81 (5.79)	15.01 (3.60)	15.54 (3.65)	18.72 (3.80)	73.57 (13.22)	87.38 (24.84)
<i>p</i>			0.927 <sup>a</sup>	0.338 <sup>a</sup>	0.339 <sup>a</sup>	0.620 <sup>a</sup>	0.774 <sup>a</sup>	0.215 <sup>a</sup>
<i>d</i>			-0.036	-0.098	0.216	-0.093	0.167	-0.143

Note: <sup>1</sup> Primary school/ Middle school, <sup>2</sup> High school, <sup>3</sup> University and higher education.

Abbreviations: *d*, effect size; IQR, interquartile range.

<sup>a</sup>Independent samples *t*-test.

<sup>b</sup>One-way ANOVA test.

<sup>c</sup>Kruskal–Wallis test.

TABLE 2 Predictors of perceptions of nursing presence and intensive care experiences (n=182)

		B	SE	$\beta$ (Beta)	t	P	Adj.R <sup>2</sup>	95% CI	
								Lower limit	Upper limit
Nursing Presence F = 12.461 p < 0.001	Constant	106.146	7.835				0.173		
	Gender	-6.418	3.615	-0.123	-1.776	0.078		-13.552	-0.716
	Educational Level	4.601	2.609	0.122	1.764	0.080		-0.547	9.750
	ICU length of stay (day)	-4.988	1.004	-0.344	-4.968	0.001		-6.970	-3.007
Intensive Care Experiences F = 26.886 p < 0.001	Constant	84.758	4.009				0.312		
	Gender	-4.093	1.850	-0.139	-2.213	0.032		-7.744	-0.443
	Educational Level	2.881	1.335	0.137	2.158	0.028		-0.246	5.515
	ICU length of stay (day)	-3.943	0.514	-0.484	-7.674	0.001		-4.956	-2.929

Abbreviations: Adj. R<sup>2</sup>, adjusted explained variance; B, regression coefficient; CI, confidence interval; F, analysis of variance; R, level of association; SE, standard error;  $\beta$  (Standardised Beta), Partial regression coefficient; t, Internal significance test of regression coefficients.

Multiple linear regression analysis was used to determine how well the explanatory variables (gender, education, and ICU length of stay) predicted the outcome variable (ICES scores). Gender, education, and ICU length of stay affected participants' ICES total score ( $R^2$ : 0.312,  $F$ : 26,886,  $p$  < 0.001). Male participants had a significantly higher mean total ICES score than their female counterparts ( $\beta$  = -0.139,  $p$  < 0.05). Participants with university and higher education had a significantly higher mean total ICES score than those with high school or lower degrees ( $\beta$  = 0.137,  $p$  < 0.05). Participants who stayed in the ICUs for a shorter period had a significantly higher mean total ICES score than those who stayed in the ICUs for a longer period ( $\beta$  = 0.484,  $p$  < 0.001) (Table 2).

Multiple linear regression analysis was used to determine how well the explanatory variables (gender, education, and ICU length of stay) predicted the outcome variable (PONS scores). ICU length of stay significantly affected participants' PONS total score ( $R^2$ : 0.173,  $F$ : 12,461,  $p$  < 0.001). Participants who stayed in the ICUs for a shorter period had a significantly higher mean total PONS score than those who stayed there longer (Table 2).

A strong positive correlation existed between total ICES and PONS scores ( $r$  = 0.889,  $p$  < 0.001). There was a strong positive correlation between ICES 'awareness of surroundings' ( $r$  = 0.751,  $p$  < 0.001), 'frightening experiences' ( $r$  = 0.770,  $p$  < 0.001), 'recall of experience' ( $r$  = 0.774,  $p$  < 0.001), and 'satisfaction with care' ( $r$  = 0.746,  $p$  < 0.001) subscales scores and PONS total score (Table 3).

## 4 | DISCUSSION

ICU patients have positive or negative experiences as they receive many treatments and interventions due to their critical condition. Patients with negative experiences suffer from physical, psychological, cognitive, or social problems and PICS after discharge, adversely affecting their quality of life (Bakhrū et al., 2018; Chung et al., 2017; Kawakami et al., 2021; McKinley et al., 2016; Usta et al., 2016). Our participants had positive ICU experiences. ICU patients have positive or negative experiences depending on

TABLE 3 The relationship between perceptions of nursing presence and intensive care experiences (n = 182).

	The presence of nursing scale	
	r	p
Intensive Care Experience Scale	0.889	0.001
Awareness of surroundings	0.751	0.001
Frightening experiences	0.770	0.001
Recall of experience	0.774	0.001
Satisfaction with care	0.746	0.001

Note: Pearson's correlation test.

sociodemographic characteristics, length of hospitalisation, treatments, mechanical ventilator, pain, and communication (Akin & Aribogan, 2006). The results showed that gender, education, and length of stay affected our participants' ICU experiences. Male participants had more positive ICU experiences than their female counterparts. Diğın et al. and Edeer et al. also reported that male patients had more positive ICU experiences than female patients (Diğın et al., 2022; Edeer et al., 2020). However, the difference was statistically insignificant. Research shows that male and female patients have similar ICU experiences (Aslan & Tosun, 2015; Bulbuloglu et al., 2022; Göktas et al., 2016; Yılmaz & Arslan, 2015). However, some researchers have documented that female patients have more positive ICU experiences than male patients (Adsay & Dedeli, 2015; Usta et al., 2016). Akin and Aribogan argue that male and female ICU patients deal with different stressors (Akin & Aribogan, 2006). Previous studies have shown that education does not affect patients' ICU experiences (Adsay & Dedeli, 2015; Aslan & Tosun, 2015; Bulbuloglu et al., 2022; Diğın et al., 2022; Edeer et al., 2020; Göktas et al., 2016; Yılmaz & Arslan, 2015). However, our results showed that education influenced participants' ICU experiences. Participants with a bachelor's degree or higher had more positive ICU experiences than those with a high school degree or lower. This finding may be because patients with lower

levels of education are more likely to have difficulty understanding the verbal or written information presented to them than those with higher levels of education.

Although previous studies have not reported a significant relationship between ICU length of stay and negative experiences, (Aslan & Tosun, 2015; Bulbuloglu et al., 2022; Diğın et al., 2022). Edeer et al. documented a negative correlation between ICU length of stay and positive experiences (Edeer et al., 2020). Goktas et al. also found that patients who stayed in ICUs for less than 3 days had more positive experiences than those who stayed there for three or 4 days (Goktas et al., 2016). Similarly, our participants who stayed in ICUs for one to 3 days had more positive experiences than those who stayed there for more than 3 days. This finding may be because patients who stay in ICUs for shorter periods experience fewer stressors than those who stay there longer.

Interaction with nurses also influences ICU patients' experiences (Hofhuis et al., 2008; O'Connell & Landers, 2008; Xu et al., 2021). Our results showed a positive correlation between ICES and PONS scores, suggesting that the more nursing presence ICU patients feel, the more positive their experiences. Despite limited research suggesting that ICU patients have high perceptions of nursing presence, (Kostovich, 2012; Mahdavi et al., 2020; Turpin, 2014) our results indicate that they have improvable perceptions of nursing presence. There may be several reasons for this. First, ICU patients experience too many stressors. Second, they are separated from their families. Third, they lose their sense of time. However, the ICUs where this study was conducted may have a highly skewed nurse-to-patient ratio. In other words, nurses have too many patients to care for. As a result, their priorities change. In addition, ICU patients may not be able to feel the presence of nurses, because nurses provide biomedical care instead of holistic care.

Our participants who stayed in the ICUs for 1–3 days felt the presence of nurses more than those who stayed there for more than 3 days. This may be because the former were exposed to fewer stressors and had fewer needs than the latter. In addition, patients with longer lengths of stay may feel the presence of nurses less because they are more affected by stressors and can meet their own needs, resulting in less interaction with nurses. Patients may interact more with nurses in the early days of their hospitalisation, or nurses may become desensitised to caring for the same patients over time. This leads us to question the effectiveness of nurses caring for the same patients over time.

Our results showed a positive correlation between ICES and PONS scores, suggesting that the more nursing presence ICU patients feel, the more positive their experiences. Nursing presence makes patients more satisfied with the care, reduces stress, and helps them cope with problems (An & Jo, 2009; Negarandeh et al., 2014; Penque & Kearney, 2015). Our participants who were more aware of their surroundings felt nurses' presence more. Patients who are aware of their surroundings are more likely to interact with nurses. Patients who interact more with nurses are more aware of their surroundings and feel the presence of

nurses. This indicates the importance of nurses communicating with patients. Our participants with more negative experiences felt the presence of nurses more. This is likely due to the fact that these patients interact more with nurses because they are separated from their loved ones and exposed to stressors, such as medical interventions and alarms. Our participants who were satisfied with the care felt the presence of nurses more. This is unsurprising because nurses take a holistic approach and spend more time with patients. As a result, they interact with them more during care. All of this enhances the patient-nurse relationship. Compared to previous studies (Kostovich, 2012; Mahdavi et al., 2020; Turpin, 2014), our participants' PONS scores suggest that they have improvable perceptions of nursing presence. In other words, ICU nurses cannot make their patients feel their presence, but patients who feel the presence of nurses have more positive ICU experiences.

#### 4.1 | Limitations

This study limitations are first, results are sample-specific, the study was conducted in only one state hospital, so cannot be generalised to all ICUs. Second, the scope of practice of the nurse and exactly how nurses could provide such support to patients' critical care experiences were not questioned.

## 5 | CONCLUSION

Our results show that ICU patients have positive ICU experiences and improvable perceptions of nursing presence. Patients who perceive nursing presence have more positive ICU experiences. Sociodemographic variables (gender, education and ICU length of stay) influence ICU patients' experiences. ICU length of stay determines what kind of experience patients have and how much they feel the presence of nurses. Nurses should consider these variables when meeting ICU patients' needs. Patients who feel the presence of nurses more are likely to have more positive ICU experiences. Therefore, nurses should encourage patients to feel their presence. Nurses should use nursing presence as an intervention in ICUs.

## 6 | RELEVANCE TO CLINICAL PRACTICE

Nurses who make their presence felt are those who voluntarily share their time and experiences with their patients. Nurses allow their patients to find meaning in their experiences. Nurses should make nursing presence known care about the uniqueness of their patients, and make patients feel valued. In order for the nurse to reveal their presence, nurses should emphasise their communication skills in their interaction with the patient, reveal the art of nursing, care about the uniqueness of the patient, and show an approach in which

the patient will feel valuable. In addition, some valuable influence ICU patients' experiences and nursing presence, therefore nurses should consider variables which affects patients' ICU experiences and nursing presence.

#### AUTHOR CONTRIBUTIONS

*Study conception and design:* OC, ABDA; *Data collection:* ABD, BA; *Data analysis and interpretation:* OC, ABDA; *Drafting of the article:* OC, ABDA; *Critical revision of the article:* OC.

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#### CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

#### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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