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## RESEARCH ARTICLE

## THE ATTITUDES AND BEHAVIORS OF INTENSIVE CARE UNIT NURSES TOWARDS END-OF-LIFE CARE

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## Abstract

**Introduction:** The end-of-life period is a process in which anxiety of death is experienced intensely and there are positive and negative experiences for the nurse and the patient. Nurses' attitudes and behaviors about death affect the quality of care in the end-of-life process.

**Aim:** The aim of the present study was to determine the attitudes and behaviors of intensive care unit nurses towards end-of-life care.

**Material and Method:** The studied sample consisted from 216 nurses working in the intensive care units of three university hospitals. In the present study, the Nurse Identification Form and The Attitude and Behaviors of The Intensive Care Unit Nurses Towards The End-of-Life Care Scale were used as the data collection forms.

**Results:** Statistically significant differences were found between attitudes subscale, behavior subscale, scale total mean scores and some variables such as the education level, the intensive care unit classification, knowledge for end-of-life care, the frequency of death in their unit. As a result of the correlation analysis, there were statistically significant positive correlations between attitudes subscale, behavior subscale, scale total mean scores, and some variables such as total working years as a nurse, total working years in the intensive care unit, age.

**Conclusions:** The level of education, the intensive care unit classification, knowledge about end-of-life care, the frequency of death in their unit, age, total working years as a nurse, and total working year in the intensive care unit have relationship with the attitudes and behaviors of intensive care unit nurses towards end-of-life care.

**Key words:** : Intensive care, intensive care unit nurses, end-of-life care.

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## INTRODUCTION

Nowadays, the time spent with chronic/deadly diseases is gradually increasing due to the increase in medical developments and living conditions. The importance of the concept of end-of-life care has become more prominent in recent years, with the prolongation of the time that healthcare professionals serve these patients.<sup>1</sup> The end-of-life period spent at home in the past is spent in hospital settings with the advancement of technology and the changing perceptions of people towards hospitals. With the increase in the time spent in hospitals, the frequency of healthcare professionals' encounters with patients at the end of life has also increased.<sup>2</sup> Health care professionals, especially nurses, are constantly encountering death and patients close to death. Undoubtedly, one of the most difficult aspects of the nursing profession is to care and treat the patient who is waiting for death. This situation becomes more difficult especially in intensive care unit nurses who encounter death more frequently.<sup>3</sup> In the care of the patient who lives the last days of life, in order to meet the emotional and physical needs of the patient, the nurse must have the necessary knowledge, skills, and attitude regarding the end-of-life care, and must recognize his own feelings in order to provide effective psychosocial support to the patient and his family.<sup>3,4</sup> In order to communicate with the patient in the last days of life and give him the support he needs, nurses reviewing their own attitudes and behaviors towards end-of-life care are effective in providing patients with better quality physical and psychological care.<sup>5</sup> The end-of-life period is a process in which anxiety of death is experienced intensely and there are positive and negative experiences for the nurse and the patient. Nurses' attitudes and behaviors about death affect the quality of care in the end-of-life process.<sup>6-10</sup> Therefore, it is of great importance to determine the attitudes and behaviors of intensive care unit nurses who frequently encounter patients in the last days of life. The aim of our study is to determine the attitudes and behaviors of intensive care unit nurses towards end-of-life care.

## MATERIAL AND METHOD

### Study design and settings

This descriptive study was conducted in three university hospital from three different cities between January and March 2020.

### Participants

There were 415 intensive care nurses in the hospitals. The inclusion criteria of the study was; voluntarily agree to participate the study, working at least for more than six months as a intensive care unit nurse. A total of 103 nurses who were not meeting the inclusion criteria were excluded from the study and a total of 96 nurse were not agree to participate. A convenience sample were used in the study. 216 intensive care unit nurses participated in the study.

### Data collection

The Nurse Identification form with socio-demographic variables related to nurses and the attitudes and behaviors of the intensive care unit nurses towards end-of-life care scale were used to collect the data of the study.

### Nurse identification form

It consists of 24 questions about socio-demographic characteristics and the experience of nurses about the end of life care.

### The attitudes and behaviors of the intensive care unit nurses towards end-of-life care scale

The scale was developed by Zomorodi in 2008 and was revised by Zomorodi and Lynn<sup>11</sup> in 2010. There are two subscale namely "attitudes of intensive care unit nurses towards end-of-life care" (10 item) and "behaviors of intensive care unit nurses towards end-of-life care" (6 item). The attitude subscale is evaluated as a five-point Likert type ("I disagree completely", "I disagree", "I disagree partially", "I agree" and "I totally agree"). The behavior subscale is evaluated as five-point likert type ("never", "rarely", "occasionally", "generally" and "always"). Of the items, only the 8th question from the attitude subscale was reversed. Apart from this, the items were coded by giving scores from 1 to 5 and they were interpreted as the attitude and behavior would be positive as the score increased. The validity and reliability study of the scale in Turkish was carried out by Yalçinkaya<sup>12</sup> (2016) The Cronbach Alpha reliability coefficient of the scale was 0.70, the attitude subscale 0.71 and the behaviour subscale 0.65. Permission was obtained from

Yalçinkaya to use the scale.<sup>12</sup>

### Statistical Analysis

IBM SPSS V22 was used for statistical analysis. Descriptive statistics of the variables were presented with numbers (n) and percentages (%). Data were analyzed using parametric tests when the normal distribution assumptions were provided and using nonparametric tests if the normal distribution assumptions failed. Independent sample t-test was performed to compare the values of the means from two groups. The one-way analysis of variance (ANOVA) test was used to determine whether there are any statistically significant differences between the means of two or more independent (unrelated) groups. Also, Bonferroni test was used for post-hoc comparisons. Pearson Correlation Coefficient was used for the measure of the strength of the association between continuous variables. The statistical significance level was set at  $p < 0.050$ .

### Ethics

Written approvals were obtained from the relevant university medical researches ethical committee (decision no: 20-1T/67). All directives of the Helsinki Declaration have been followed and informed consent was obtained from the participants.

### RESULTS

Of the participants 63.9% were women, 62.0% were single, the mean age was  $28.7 \pm 3.8$  years, the mean of the total working years in the profession was  $6.3 \pm 3.6$  years, the mean of the working years in intensive care unit was  $5.5 \pm 2.9$  years. Most of the participants had bachelor degree in nursing 93.5 %, 50.9 % working in a third-level intensive care unit, 54.2 % did not choose the profession by will, 77.8 % were not satisfied with their job, 54.6 % had knowledge about end-of-life care, 46.6% received this knowledge from books / journals, 65.2 % thought that his/her knowledge is sufficient, 68.5% had been found to see death every day (Table 1).

A statistically significant differences were found between the education level of intensive care unit nurses and attitude towards end-of-life care ( $p = 0.010$ ), behavior ( $p = 0.030$ ) and total scale mean scores ( $p = 0.013$ ). A statistically significant differences were found between the intensive care unit classification they worked with and attitude towards end-of-life

care ( $p < 0.001$ ), behavior ( $p < 0.001$ ) and scale total mean scores ( $p < 0.001$ ). Bonferroni test was used in binary comparisons between groups (post-hoc). While there was a statistically significant difference between the 3rd and 2nd level intensive care units ( $p < 0.001$ ) and the 3rd and 1st level intensive care units ( $p < 0.001$ ) mean score, there was no statistically significant difference between the 1st and 2nd level intensive care unit ( $p = 0.890$ ) mean score. A statistically significant differences were found between knowledge for end-of-life care and attitude towards end-of-life care ( $p < 0.001$ ) and scale total mean scores ( $p < 0.001$ ). There were a statistically significant differences between the frequency of death they see and attitude towards end-of-life care ( $p = 0.030$ ), behavior ( $p < 0.001$ ) and scale total mean scores ( $p < 0.001$ )-(Table 2).

As a result of the correlation analysis, there was a positive way statistically significant relationship between intensive care unit nurses' age and attitude towards end-of-life care ( $r = 0.249$ ,  $p < 0.001$ ), behavior ( $r = 0.093$ ,  $p = 0.017$ ), and scale total score ( $r = 0.270$   $p < 0.001$ ), between total working years in the intensive care unit and attitude towards end-of-life care ( $r = 0.293$   $p < 0.001$ ), behavior ( $r = 0.229$   $p = 0.001$ ) and scale total score ( $r = 0.403$   $p < 0.001$ ), and between the total working years as a nurse and the attitude towards end-of-life care ( $r = 0.271$   $p < 0.001$ ), behavior ( $r = 0.151$   $p = 0.026$ ), and the scale total score ( $r = 0.336$   $p < 0.001$ )-(Table 3).

### DISCUSSION

Diagnosed with a life-threatening disease is difficult for the patient and his family as well as for healthcare professionals. Health care professionals, especially nurses, are constantly encountering dying patients and death. One of the most difficult aspects of the nursing profession is to care the dying patient.<sup>6</sup> This situation becomes more difficult in intensive care unit nurses who encounter death more frequently.<sup>13</sup> Intensive care unit nurses have many responsibilities such as reducing the pain of the dying patient, improving the quality of life, controlling symptoms such as anxiety, fear, pain, and managing other physiological symptoms, and ensuring the patient's participation in treatment. In order for intensive care unit nurses to give

the qualified care to patients in this process, they need to know the needs of patients, have accepted the event of death, and developed a positive attitude and behavior towards death.<sup>14-16</sup>

This research was carried out to determine the attitudes and behaviors of intensive care unit nurses towards end-of-life care. In our study, nurses with a master's degree had higher mean scores of attitudes subscale, behavior subscale, and scale total points towards end-of-life care. This shows that as the education level increases, attitudes and behavior towards end-of-life care become more positive. Ali et al.<sup>17</sup> reported that nurses' level of education affects Nurses' attitudes toward caring for dying patient. Razban et al.<sup>18</sup> found a correlation between nurses' level of education and Nurses' attitudes toward palliative care. Several studies have assessed nurses' attitudes toward different aspects of palliative care and reported that nurses' level of education affects nurses' attitudes towards end of life care.<sup>19,20</sup> The results we obtained from our study is in line with the literature from these aspects.

In current study, the attitudes and behaviors of the nurses working in the third level intensive care unit regarding the end of life care were more positive. Third-level intensive care units require complex, comprehensive support and management of organ dysfunction. Second level intensive care units also requires the management of basic life support and organ failure. First level intensive care units are intensive care units that support physiological stabilization and short-term light organ dysfunction.<sup>21</sup> We thought that nurses who work in 3<sup>rd</sup> level intensive care units care for end of life patients more than other nurses working in 1<sup>st</sup> and 2<sup>nd</sup> level intensive care units. This may be the reason for the differences between nurses' attitudes and behaviors towards the end of life care.

In this study, it was found that the nurses who have knowledge of end-of-life care have more positive attitudes regarding the end of life care. Earlier studies in different contexts also showed a positive correlation between nurses' knowledge about palliative care and their attitudes toward it.<sup>17-20</sup> It was reported that an increase in the level of knowledge for end-of-life care provides an increase in the positive attitude toward end-of-life care.<sup>17-20</sup> Our study is in line with this phenomenon reported in the literature.

In our study, nurses who encounter death every day have higher mean scores than those who encounter once a week regarding the attitudes and behavior subscales. Kahder<sup>22</sup> reported that the increase in the incidence of death that nurses encountered affects the attitude towards end-of-life care positively. Abu Hasheesh et al.<sup>23</sup> reported that nurses who encountered death more frequently showed more positive attitude towards end-of-life care. Our results are in line with the literature in this respect.

In this study, with the increase in age, total working years in the profession, and total working years in the intensive care unit, the attitude, and behavior regarding the end of life care become more positive. In the literature, it is stated that these variables are related to the experience for end-of-life care. In other words, as the age, total working years in the profession and total working years in intensive care unit increases, the experience for end-of-life care also increases. Increasing experience positively affects attitude and behavior towards end-of-life care.<sup>22,24-27</sup>

### Limitations

The sample included only nurses working in adult clinics. Therefore, our data, which is based on the limited sample and the results obtained under the nurses' self-declarations, cannot be generalized beyond the sample.

### CONCLUSIONS

This study showed that education level is an important aspects for end of life care. Nurses who have masters degree education showed more positive attitude and behaviour towards end of life care. The study suggests that nurses who will work in the intensive care units need to be encouraged to do higher education. Another result we obtained from our study was having knowledge about end-of-life care has positive affect on attitudes and behaviors of intensive care unit nurses towards the end of life care. This resut suggests that educational designers should include specific courses about death and end of life in undergraduate and postgraduate nursing curricula. The findings also suggest that working in the 3<sup>rd</sup> level intensive care unit, encountering death every day, increasing in age, increase in the total working years as a nurse, and

increase in the total working years in the intensive care unit affect attitudes and behaviors of intensive care unit nurses towards the end of life care. These findings suggest that intensive care units are specific units. The nurses who will work here should be experienced in the field.

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## ANNEX

**Table 1:** Distribution of nurses' sociodemographic characteristics

	<b>n</b>	<b>%</b>
<b>Gender</b>		
Female	138	63.9
Male	78	36.1
<b>Marital status</b>		
Single	134	62.0
Married	82	38.0
<b>Education level</b>		
Bachelor degree	202	93.5
Master degree	14	6.5
<b>Classification of intensive care unit (ICU)</b>		
1.level	33	15.3
2.level	43	19.9
3.level	110	50.9
Not classified	30	13.9
<b>Choosing the profession willingly</b>		
Yes	99	45.8
No	117	54.2
<b>Job satisfaction</b>		
Yes	48	22.2
No	168	77.8
<b>Knowledge about end of life care</b>		
Yes	118	54.6
No	98	45.4
<b>Where did you get this knowledge</b>		
In-service training	32	27.1
Books / journals	55	46.6
Congress / scientific meeting	31	26.2
<b>Is this knowledge enough</b>		
Yes	77	65.2
No	41	34.7
<b>How often do you encounter death (frequency of death you see)</b>		
Once a week	68	31.5
Everyday	148	68.5
<b>Age</b>	<b>Mean ± SD</b>	
	28.70 ± 3.78	
<b>Total working year in the intensive care unit</b>	5.53 ± 2.93	
<b>Total working year as a nurse</b>	6.29 ± 3.63	

*Data collected from intensive care unit was adult ICU*



**Table 2.** The relationship between the attitudes and behaviors of intensive care unit nurses towards end-of-life care and some of their characteristics

	<b>Attitudes</b>	<b>Behaviors</b>	<b>Scale total</b>
<b>Education level</b>			
Bachelor degree	31.4±3.5	13.7±3.0	45.1±4.3
Master degree	33.6±3.4	14.4±3.4	48.0±3.3
<i>p</i>	<b>0.010</b>	<b>0.030</b>	<b>0.013</b>
<b>Classification on ICU</b>			
Level 1	29.3±3.4	11.4±2.6	41.8±4.3
Level 2	30.4±2.0	12.7±2.8	45.6±3.8
Level 3	33.3±2.9	16.3±1.3	46.0±4.2
<i>p</i>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>
<b>Knowledge about end of life care</b>			
Yes	33.7±2.0	13.8±2.1	47.4±2.6
No	28.9±3.2	13.7±3.9	42.6±4.5
<i>p</i>	<b>&lt;0.001</b>	0.800	<b>&lt;0.001</b>
<b>How often do you encounter death (frequency of death you see)</b>			
Once a week	31.0±3.0	13.02±3.2	44.1±4.0
everyday	32.5±4.4	15.29±1.9	47.8±3.9
<i>p</i>	<b>0.030</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>

**Table 3.** Correlations between the attitudes and behaviors of intensive care unit nurses towards end-of-life care and some of their characteristics

	<b>Attitudes</b>	<b>Behaviors</b>	<b>Scale total</b>
<b>Age</b>	r= 0.249 p<0.001	r= 0.093 p=0.017	r= 0.270 p<0.001
<b>Total working year in the intensive care unit</b>	r= 0.293 p<0.001	r= 0.229 p=0.001	r= 0.403 p<0.001
<b>Total working year as a nurse</b>	r= 0.271 p<0.001	r= 0.151 p=0.026	r= 0.336 p<0.001

r: Pearson correlation coefficient, p<0.05 Significance level