RESEARCH ARTICLE

Determination of the Intensive Care Nurses' Attitudes towards Evidence-Based Practices

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Abstract

Objective: This research was carried out to determine the attitudes of intensive care nurses towards evidence-based nursing.

Methods: This descriptive study was conducted with 134 nurses working in the intensive care units of a university hospital between January and June 2021. Research data were collected by online data collection technique using "Descriptive Form for Nurses" and "Evidence-Based Nursing Attitude Questionnaire (EBNAQ)". The obtained data were analyzed by using descriptive statistics (number, percentage, mean) and Mann Whitney U tests in the computer-aided SPSS package program.

Results: It was determined that the intensive care nurses' mean total score in the Evidence-Based Nursing Attitude Questionnaire (EBNAQ)was 66.35±6.22. Evidence-Based Practice Intentions Subscale was found to be higher in female nurses than in male nurses (p<0.05). Moreover, nurses with 11 years or more of professional experience had a higher mean score in the subscale Emotions Related to Evidence-Based Nursing than those with 10 years or less of intensive care and professional experience (p < 0.05).

Conclusion: It was determined that the attitudes of the nurses toward Evidence-Based Nursing were found to be positive. Moreover, it was determined that the nurses who had knowledge about evidence-based practice had more positive attitudes toward Evidence-Based Nursing.

Keywords: Evidence, Evidence-Based Practice, Nursing, Attitude, Intensive Care

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INTRODUCTION

An innovative healthcare system requires patient-centered care and efficiency based on scientific evidence to provide high-quality care. In addition, it is a complex nonlinear process, and each step requires different competencies such as knowledge, attitude, and behavior (1). With rapid changes in the healthcare system, more emphasis is placed on improving quality, performance, patient safety, and cost control. Therefore, it is the professional responsibility of nurses to use the best scientific evidence and integrate accessible research evidence into decision-making processes to design and implement health care plans (2–4).

EBP (Evidence-based practice), composed of components such as formulating clinical questions, the integration of best available evidence, evaluating its validity relevance, and feasibility (2,5), is a basic competency for nurses to provide quality care. It requires the application of research evidence with clinical expertise and patient values when making care decisions (6–8).

Evidence-based practice is a global concept that requires the use of the best evidence about patient care through critical evaluation and synthesis, as well as the deliberate, explicit, and reasonable use of the best available evidence when making decisions about the care/treatment (9). Evidence-based practice is an important feature that moves the nursing profession away from traditional and ineffective practices. It improves patient outcomes by employing scientific and well-reasoned decisions and promotes consistency of care by improving standards (10).

Evidence-based nursing practice guides nurses in incorporating a patient perspective into theory and evidence. Thus, nurses can provide safe and quality care to their patients (9). It is important to integrate theory and care practices in establishing the scientific foundations for nursing to gain a professional identity. For this reason, nurses need to use information resources in clinical practices, gain professional autonomy, increase the quality of care, and use the obtained information in care practices (11). EBP improves nurses' problem-solving and decision-making skills. It is important in terms of informing nurses of current information, improving clinical decision-making and judgment, and increasing the participation of patient preferences and values in the decision-making process. In this regard, evidence-based practice is accepted as a paradigm shift in nursing care (12).

The use of EBP in intensive care units, where nursing care is predominantly involved, is possible with the attitudes and skills of the nurses working in these units. Therefore, this study was conducted to evaluate the attitudes of nurses working in intensive care units towards evidence-based nursing.

METHODS

Study design

The research is a descriptive study.

Time and place of the study

The research was conducted between January and June 2021 in the intensive care units of a university hospital in eastern Turkey (Internal Medicine Intensive Care Unit, Neonatal Intensive Care Unit, Anesthesia and Reanimation Intensive Care Unit, Coronary Intensive Care Unit, Gastroenterology Intensive Care Unit, Pediatric Intensive Care Unit, Cardiovascular Surgery Intensive Care Unit and Neurology Intensive Care Unit).

Population and sample of the study

The study population was composed of 178 nurses working in the intensive care units of the specified university hospital. Sampling was not conducted from the population in the research. Intensive care nurses who volunteered to participate the study were included in the sample of the study. In this study, 134 nurses who agreed to participate in the research were included in the sample of the study. The sample represented 75% of the population. The scope of the research included only permanent staff nurses of the intensive care unit. Nurses working temporarily or as interns in the intensive care units were not included.

Data collection tool

Data were obtained from the Descriptive Form for Nurses and Evidence-Based Nursing Attitude Questionnaire (EBNAQ) (13) which were created in line with the literature by the researchers (14–16).

Descriptive form for nurses

It consisted of questions aiming to evaluate the characteristics of nurses such as gender, age, educational status, marital status, length of service in the intensive care unit, the intensive care unit where s/he is working, working style, participation in scientific meetings, membership in professional associations, and following scientific publications.

Evidence-Based Nursing Attitude Questionnaire (EBNAQ)

The Turkish validity and reliability of the EBNAQ, which was developed by Ruzafa-Martínez et al. in 2011, were evaluated by Ayhan et al. in 2015. This 15-item scale is a five-point Likert type. (1-Strongly Disagree; 2-Disagree; 3-Somewhat agree; 4-Agree; 5-Strongly Agree). Eight of the items include positive statements (1st, 2nd, 5th, 7th, 9th, 11th, 13th, 14th items) and seven of them contain negative statements (3rd, 4th, 6th, 8th, 10th, 12th, 15. items). A minimum of 15 and a maximum of 75 points are obtained from the scale. The scale has no breakpoints. A high score from the scale indicates that the attitude towards evidence-based nursing is positive. The scale has three subscales including Beliefs

and Expectations Towards Evidence-Based Nursing Subscale (1,2,7,9,11,13 and 14 articles), Emotions Related to Evidence-Based Nursing Subscale, and Evidence-based Practice Intention Subscale (16).

Ayhan et al. reported that the original scale's beliefs and expectations towards evidence-based nursing were α=0.86, evidence-based practice intention was α=0.63, emotions related to evidence-based nursing were α=0.70, and the total Cronbach's alpha coefficient for the scale was 0.85 (16).

In this study, the total Cronbach's Alpha coefficient of EBNAQ was calculated as α=0.86. In addition, the scale's Beliefs and Expectations towards Evidence-Based Nursing subscale Cronbach Alpha coefficient was α=0.76, the Evidence-Based Practice Intention subscale Cronbach Alpha coefficient was α=0.76, and Emotions Related to Evidence-Based Nursing Subscale Cronbach Alpha coefficient was α=0.77.

Data collection

Data were collected from intensive care nurses using an online data collection technique through the link https://forms.gle/hWq2D76aBoGoAboc6. The survey form link was shared with the nurses through WhatsApp groups where intensive care nurses are registered, enabling them to access and fill out the forms online.

Statistical analysis

IBM SPSS 21.0 for Windows (Armonk, NY: IBM Corp) was used in the analysis of the research data. Descriptive characteristics and scores on the Attitude towards Evidence-Based Nursing scale for intensive care nurses were analyzed using numbers, percentages, standard deviation, and mean. In the analysis of the difference between some descriptive characteristics of intensive care nurses and scores on the Evidence-Based Nursing scale, numbers, percentages, mean, standard deviation, and the Mann-Whitney U test were utilized. A value of 0.05 was accepted as the significance level in the study.

Limitations of the research

The limitations of the study are that the study was conducted in a single institution and the data was based on nurses' self-reports.

Ethical dimension

Necessary permissions were obtained from Maria Rufaza-Martinez, who developed the scale used in the research, and Yasemin Ayhan, who conducted the Turkish validity and reliability of the scale. Before starting the study, ethics committee approval was obtained from the Non-Interventional Research Ethics Committee of a university (Decision number 2020/16-22), legal permission was obtained from the hospital where the study was conducted, and informed consent was obtained from the nurses who agreed to participate in the study.

RESULTS

The mean age of the intensive care nurses is 28.27±5.35 years, 74.6% of them are women. It was observed that 10.4% of intensive care nurses had completed high school, 8.2% had completed associate degrees, 75.4% had completed bachelor's degrees, and 6.0% had completed postgraduate education. Additionally, it was found that 10.4% of working intensive care nurses were continuing their education at any level (completing their bachelor's degree, continuing their associate degree, or pursuing postgraduate education). While 83.6% have 10 years or less working experience, 92.5% have 10 years or less intensive care work experience. 34.3% of the intensive care nurses attended scientific meetings, 9.7% were members of a professional association and 38.1% of intensive care nurses follow scientific publications. In addition, 34.3% of the intensive care nurses stated that they knew the concept of evidence-based nursing, and 80.4% of them stated that they learned the concept of evidence-based nursing (EBN) from the educational institutions they studied (Table 1).

The total mean EBNAQ score of the intensive care nurses is calculated as 66.35±6.22, the mean score in the subscale Beliefs and Expectations towards Evidence-Based Nursing is 31.73±2.97, the mean score in subscale Evidence-Based Practice Intention is 16.88±2.15, and the mean score in subscale Emotions Related to Evidence-Based Nursing is 17.73±2.03 (Table 2).

While the female nurses' mean score in the subscale Evidence-Based Practice Intention was 17.12±2.02, male nurses' mean score in the subscale Evidence-Based Practice Intention was calculated as 16.17±2.40. The correlation between the gender of the intensive care nurses and the mean score in the subscale Evidence-Based Practice Intention was statistically significant ($p<0.05$, Table 3).

When the intensive care nurses' mean scores in EBNAQ were evaluated according to the working time in the profession, it was determined that the mean score of the nurses working for 10 years or less in the subscale Emotions Related to Evidence-Based Nursing was 17.57±2.04, and the mean score of those with 11 years or more working experience was 18.59±1.76.When the nurses' EBNAQ and the mean scores in the subscale were evaluated according to their working time in the intensive care unit, it was determined that mean score of the nurses who have worked for 10 years or less in the subscale Emotions Related to Evidence-Based Nursing is 17.62±2.05, and mean score of the nurses who have working experience of 11 years or more in the subscale is 19.20±1.03. The correlation between the nurses' working time in the intensive care unit and their mean score in the scale Emotions Related to Evidence-Based Nursing was found to be statistically significant ($p<0.05$, Table 3).

When the nurses' professional associations' membership status and EBNAQ and its subscale mean scores were evaluated, it was seen that scores in the subscale Beliefs and Expectations Towards Evidence-Based Nursing were 30.07±3.22 for those who were members of a professional association, and 31.91±2.90 for those who were not. A statistically significant correlation was found between the Beliefs and Expectations towards Evidence-Based Nursing subscale mean score and the status of nurses not being a member of a professional association (p<0.05, Table 3).

Table 1. Distribution of Descriptive Features of the Intensive Care Nurses

Characteristics	N	%
Age (Mean±SD)		28.27±5.35
Gender		
Female	100	74.6
Male	34	25.4
Education Level		
High school	14	10.4
Associate Degree	11	8.2
Undergraduate	101	75.4
Graduate	8	6.0
The Status of Continuing an Education		
Yes	14	10.4
No	120	89.6
Continuing Learning Process* (n=14)		
Associate Degree	3	21.4
Undergraduate	2	14.2
Graduate	9	64.4
Working Time in the Profession		
10 years and below	112	83.6
11 years and above	22	16.4
Intensive Care Unit Where The Nurse Works		
Internal Medicine Intensive Care	41	30.6
Neonatal Intensive Care	33	24.6
Anesthesia Intensive Care	27	20.1
Coronary Intensive Care	10	7.5
Gastroenterology Intensive Care	8	6.0
Pediatric Intensive Care	6	4.5
CVS Intensive Care	5	3.7
Neurology Intensive Care	4	3.0
Working Time in the Intensive Care Unit		
10 years and below	124	92.5
11 years and above	10	7.5
Status of Attending a Scientific Meeting		
Yes	46	34.3
No	88	65.7
Professional Association Membership Status		
Yes	13	9.7
No	121	90.3
Professional Association Membership* (n=13)		
Turkish Nurses Association	3	23.0
Intensive Care Nurses Association	2	15.3
Other**	8	61.7
Following Scientific Publication		
Yes	51	38.1
No	88	61.9

Table 2. Mean Scores of the Attitude towards Evidence-Based Nursing Questionnaire

Scale Score (n=134)	Mean ± S.S.	Min.	Max.
EBNAQ	66.35 ± 6.22	51	75
Beliefs and Expectations Towards EBN	31.73 ± 2.97	21	35
Evidence-based Practice Intention	16.88 ± 2.15	12	20
Emotions Related to EBN	17.73 ± 2.03	4	20

Table 3. The Distribution of the Relationship Between the Variables Related to Intensive Care Nurses and the EBNAQ and Its Subscales

Characteristics	N	Beliefs and Expectations		Practice Intention		Emotions		EBNAQ	
		Mean	SS	Mean	SS	Mean	SS	Mean	SS
Gender									
Female	100	31.81	3.13	17.12	2.02	17.89	1.94	68.62	6.30
Male	34	31.52	2.48	16.17	2.40	17.29	2.24	65.00	5.87
t/p		U=155.0 p=0.46		**U=1310.0 p=0.04***		U=1466.0 p=0.22		U=1402.0 p=0.12	
Working Time in the Profession									
10 years and less	112	31.66	2.82	16.77	2.14	17.57	2.04	66.01	6.08
11 years and more	22	32.09	3.74	17.40	2.19	18.59	1.76	68.09	6.76
t/p		U=1055.0 p=0.28		U=1018.5 p=0.19		**U=857.5 p=0.02***		U=966.0 p=0.10	
Working Time in ICU									
10 years and less	124	31.63	2.96	16.85	2.19	17.62	2.05	66.11	6.29
11 years and more	10	33.00	2.94	17.20	1.68	19.20	1.03	69.40	4.50
t/p		U=440.5 p=0.12		U=573.0 p=0.68		**U=350.0 p=0.02***		U=460.5 p=0.17	
Professional Association Membership									
Yes	13	30.07	3.22	16.23	1.73	17.30	1.97	63.61	6.19
No	121	31.91	2.90	16.95	2.19	17.78	2.04	66.65	6.18
t/p		**U=515.0 p=0.03***		U=623.0 p=0.21		U=670.5 p=0.37		U=542.0 p=0.06	

DISCUSSION

Beliefs, attitudes, and social norms influence individuals' intentions to engage in a particular behavior. The literature emphasizes that there is also a correlation between attitudes and Evidence-Based Practices (EBP) in healthcare settings (17). EBP facilitates the clinical decision-making process by considering the feasibility, significance, and effectiveness of health services (18). It is seen that nurses who use an evidence-based approach in societies that support EBP make a difference in patient care (19). The use of EBP is needed in order to reduce the increasing costs in health care and to increase the effectiveness of the care (20). Therefore, it is important to develop a positive attitude towards EBP.

In this study, it was observed that the nurses' total mean score in EBNAQ was 66.35±6.22. The lowest score obtained from the scale is 15 and the highest score is 75. High scores show that the attitude of the nurses towards evidence-based nursing is positive. When other studies on the subject are examined, mean score of the nurses in EBNAQ was determined as

61.87±9.44 by Ayhan et al. (2015), as 57.20±9.06 by Dikmen et al. (2018), as 59.68 ± 6.91 by Al-Maskari & Patterson (2018), as 57.66±7.96 by Yıldırım &Yıldız (2020), and as 46.36±3.95 by Yilmaz et al. (2020). Although there is a difference between EBNAQ mean scores in this study and other studies, it is seen that the mean scores of the nurses are similar and moderate level. These data suggest that nurses have a positive attitude towards evidence-based nursing (16,21–24) .

In this study, it was found that female nurses had a higher mean total score in EBNAQ compared to male nurses, and a statistically significant relationship was found between the genders and the mean score in the subscale Evidence-Based Practice. Dikmen et al. (2018) reported that female nurses had a higher mean total score in EBNAQ compared to male nurses and that there was a statistically significant correlation in the subscale Beliefs and Expectations towards Evidence-Based Nursing. Other studies such as Daştan and Hintistan (2018), Durmus (2017), Patelarou et al. (2017), Yıldırım and Yıldız (2020) show that female nurses have a higher mean total score in EBNAQ compared to male nurses but there is no significant correlation between genders. Although it is thought that the low number of male nurses in this study and other studies has led to this result, it has been concluded that the attitudes of female nurses towards evidence-

based nursing are more positive than male nurses (14,22,23,25,26).

In some studies, it is reported that increasing education levels have a positive effect on general attitudes towards EBP (14,24). However, this study and other similar studies show that the level of education does not affect the mean scores in EBNAQ. This suggests that it is due to the fact that nurses included in the study have similar educational levels (27–29).

In this study, it was determined that ICU nurses who have worked in the profession and the intensive care unit for 11 years or more have a high mean score in the subscale Emotions Related to Evidence-Based Nursing. When similar studies supporting this finding were examined, it was found that Yıldırım and Yıldız (2020) reported that nurses' mean scores in the subscale Beliefs and Expectations towards Evidence-Based Nursing were higher in nurses who completed one year in the profession (22). Durmuş (2017) stated that nurses' mean score in EBNAQ, their mean score in the subscale Emotions Related to Evidence-Based Nursing, and their mean scores in the subscale Beliefs and Expectations Towards Evidence-Based Nursing were higher in nurses who had a working experience of five years or less (26). Daştan and Hintistan (2018) reported that nurses with a working experience of one to six years had a higher mean score in EBNAQ than other groups (25). Patelarou et al. (2017) stated in their study that nurses with short working

experience have a more positive attitude towards EBP (14). Contrary to these findings, some studies show that there is no significant correlation between the mean total score of EBNAQ and working experience (28).

When the status of being a member of a professional association of the intensive care nurses participating in this study and their mean scores in the subscale Beliefs and Expectations towards Evidence-Based Nursing were examined, it was seen that the mean score of those who were not members of the association was higher than those who were members. Yılmaz et al. (2020) reported that there was a significant correlation in the Beliefs and Expectations towards Evidence-Based Nursing subscale mean score, while the mean scores of the EBNAQ and other subscales of the nurses who were not members of the professional association were high and statistically significant (21). This result obtained in the studies suggests that it may be due to the higher number of nurses who are not members of an association.

In the study, it was seen that the mean score of the nurses who attended scientific meetings and followed the scientific publications in EBNAQ was higher than the nurses who did not attend the meetings and did not follow the scientific publications, but this result was not statistically significant. Kilicli et al (2019) reported that nurses' participation in scientific studies significantly increased the subscale mean score

in the Evidence-Based Practice Intention. Moreover, Yıldırım and Yıldız (2020) reported that the participation of nurses in scientific studies statistically significantly increased the subscale mean scores and total scores of the EBNAQ ((15,22). Other studies, on the other hand, show that the correlation between nurses who attend scientific meetings and follow publications and nurses who do not follow scientific publications/do not attend scientific meetings is not significant (21,25,30). Professionalization in nursing requires high professional knowledge and continuous development. It is thought that nurses improve their professional knowledge with scientific meetings they attend and scientific research they do, and thus they raise their level of nursing professionalism (30). Nurses' experience in conducting and publishing the research increases their knowledge about the steps of the research process. It also improves their awareness of the importance of EBP. Therefore, it is important to encourage nurses to involve research, publication, and scientific activities.

CONCLUSION

According to the data obtained from the study, it was determined that considering the intensive care nurses; female nurses' overall mean total score of EBNAQ and Evidence-Based Practice Intention Practice subscale mean score is higher than that of male nurses. Nurses with intensive care and professional experience of 11 years or

more had a high mean score in the subscale Emotions Related to Evidence-Based Nursing. It was also observed that the mean score in the subscale Beliefs and Expectations towards Evidence-Based Nursing was high in those who were not members of a professional association. In addition, it was concluded that having knowledge about the concept of EBN increased the nurses' mean score in EBNAQ.

In line with these results; it is recommended to disseminate EBP awareness in the nursing education process, to encourage nurses who working in the clinical field to employ EBP, and to create appropriate conditions in which they can integrate the EBP into care. It is also recommended to organize training programs that include EBP's contributions to nursing care for nurses working in intensive care units, to become a member of the association, to follow scientific publications, to have work experience, and to conduct studies on evaluate the effect of gender and education level on the EBNAQ score.

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