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Research Article

Determining Attitudes of Nurses Toward Evidence-Based Nursing in a University Hospital Sample

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Abstract

AIM: This study aimed to determine the attitudes of nurses working in a university hospital toward evidence-based nursing.
METHOD: This descriptive and cross-sectional research included 529 nurses working in a university hospital during November 1 to November 30, 2018. Data were collected using the information form and Attitude Toward Evidence-Based Nursing Questionnaire (AEBNQ). Descriptive statistical methods, the Shapiro–Wilk test, the Mann–Whitney U test, and the Kruskal–Wallis test were used for statistical analyses.
RESULTS: The average age of the nurses was 36.55±9.29 years, 91.1% were female, and the average work experience was 12.61±9.56 years. Moreover, 53.4% of the nurses were working in surgical departments, and 50.3% were working as clinical nurses. The total mean score of AEBNQ of the nurses was 58.23±9.34, and it was determined that their attitudes toward evidence-based nursing was positive. It was confirmed that for some subscales, the mean scores of AEBNQ of the female nurses and nurses working in internal disease departments were significantly high.
CONCLUSION: Attitudes of the nurses toward evidence-based nursing were found to be positive. It was concluded that the department in which the nurses worked and being female affected their attitudes toward evidence-based nursing.
Keywords: Attitude, evidence-based nursing, nursing

Introduction

In recent years, evidence-based healthcare has underlined the necessity of nursing as a research-based profession. The term "evidence" is used to describe research results, whereas the term "clinical evidence" is used to describe individual-centered clinical trials that guide healthcare interventions (Kara & Babadağ, 2003).

Evidence-based practices ensure the use of clinical expertise and the best available evidence for clinical decision making related to individual patient care and provide an effective, rational, and dynamic care with experience and judgment (Keeley et al., 2016; Kocaman, 2003; Şenyuva, 2016; Yurtsever & Altıok, 2006). Therefore, the transfer of clinical research findings to practice is essential for evidence-based nursing practices (Taş-Arslan & Çelen, 2018).

In the professionalization of nursing, decision making based on scientific knowledge is the most determining factor; nurses' practices need to be evidence based (Ashktorab et al., 2015; Dikmen et al., 2018). In evidence-based nursing, it is also important that the nurses integrate patient values and best research evidence when making decisions about patient care (Keeley et al., 2016; Leufer & Cleary-Holdforth, 2009; Yılmaz, 2005). Furthermore, attention is paid to the importance of nursing education and organizational support to ensure the sustainability of evidence-based nursing practices (Özdemir & Akdemir, 2009).

Evidence-based nursing is defined as "the process of making decisions by using patient preferences, clinical nursing expertise, and best available evidence in care environment" (Stevens, 2013). Nurses, who constitute the most populous group of healthcare

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providers in health institutions, are obliged to define the best scientific evidence and to transfer these scientific evidences to their applications (Yılmaz et al., 2018). Evidence-based nursing practices and interventions are important in terms of improving the quality of care and the expected results of the care on the patient, conducting the care on a standard basis, and increasing the satisfaction of the nurse (Yurtsever & Altıok, 2006).

It is emphasized in the literature that with evidence-based practices, resources are used more efficiently, patient care is improved, costs and hospital stay are reduced, patient satisfaction is increased, and unnecessary and ineffective practices are eliminated (Daştan & Hintistan, 2018). In developing strategies for increasing the evidence-based practices, first, the attitudes of the nurses toward evidence-based practices should be determined and changed positively (Mehrdad et al., 2012). In this context, this research was conducted to determine the attitudes of nurses working in a university hospital toward evidence-based nursing practices.

Research Questions

1. What are the towards evidence-based nursing practices attitudes levels of the nurses working in the university hospital?
2. Is there a relationship between the descriptive characteristics of the nurses and their level of attitude towards evidence-based nursing practices?

Method

Study Design

This is a cross-sectional and descriptive study.

Sample

The population of the study included 873 nurses working in all the units of a university hospital during November 1 to November 30, 2018. In this research, we aimed to reach the whole universe without selecting the sample. The sample of the study consisted of 529 nurses working at the time of the study and who voluntarily agreed to participate in the research (participation rate in the study was 60.6%).

Data Collection

Data were obtained through the information form and Attitude Toward Evidence-Based Nursing Questionnaire (AEBNQ).

Information Form

This was developed by the researchers and included 6 questions that examine the age, sex, years of experience in the profession, working time in the institution, department, and position of management of the nurses.

Attitude Toward Evidence-Based Nursing Questionnaire (AEBNQ)

This scale was developed by Ruzafa-Martinez et al. (2011), and validity and reliability study was conducted by Ayhan et al. (2015). The scale consists of 3 subscales, namely Beliefs and Expectations toward Evidence-Based Nursing, Evidence-Based Practice Intention, and Emotions Related to Evidence-Based Nursing, with a total of 15 items. In total, 8 items include positive expression (items 1, 2, 5, 7, 9, 11, 13, and 14) and 7 include negative expression (items 3, 4, 6, 8, 10, 12, and 15); coding was performed by reversing the negative items. The minimum score of the 5-point Likert scale (1=strongly disagree, 2=disagree, 3=slightly agree, 4=agree, and 5=strongly agree) for 15 items was 15, and the maximum score was 75. A high score obtained from the scale shows that the attitude toward evidence-based nursing is positive. The Cronbach's alpha of the whole scale was 0.90 (Ayhan et al., 2015). In this study, the Cronbach's alpha of the whole scale was found as 0.913.

The forms were collected by the researcher by face-to-face interviews at the appropriate time in the clinics where the nurses work. It took approximately 10 minutes to fill in the forms.

Statistical Analysis

The Number Cruncher Statistical System 2007 (Kaysville, UT, USA) was used for statistical analysis. Descriptive statistical methods (mean, standard deviation, median, first quartile, third quartile, frequency, percentage, minimum, maximum) were used to evaluate the data. The suitability of the quantitative data for normal distribution was tested with the Shapiro–Wilk test and graphical analysis. Independent t test was used for the comparison of quantitative variables showing normal distribution between the 2 groups, and the Mann–Whitney U test was used for the comparison of quantitative variables not showing a normal distribution between the 2 groups. The Kruskal–Wallis test and the Mann–Whitney U test with Bonferroni adjustment were used for the comparison of quantitative variables not showing a normal distribution between more than 2 groups. Statistical significance was accepted as $p < 0.05$.

Ethical Considerations

Before collecting the data, written permission was taken from deanery of the institution in which the research was carried out and Clinical Research Ethics Committee of Istanbul University Faculty of Medicine (Protocol no: 2018-995). Furthermore, the nurses participating in the study were informed about the purpose and content of the study, and their verbal and written consents were obtained for their voluntary participation.

Table 1
Distribution of Descriptive Features of the Nurses (n=529)

n=529		n	%
Age (years)	Mean±SD	36.55±9.29 (Min=19, Max=64)	
	≤25	54	10.2
	26–30	118	22.3
	31–35	96	18.1
	36–40	83	15.7
	41–45	86	16.3
	≥46	92	17.4
Gender	Female	482	91.1
	Male	47	8.9
Work Experience in the Institution, mean±SD (years)		12.61±9.56 (Min=1, Max=42)	
Experience in The Profession (year), mean±SD (years)		14.41±9.82 (Min=1, Max=42)	
Position of Management	Yes	87	16.4
	No	442	83.6
Department	Surgery	277	52.4
	Internal Diseases	252	47.6
Unit	Service	266	50.3
	Intensive Care	98	18.5
	Operating Room	44	8.3
	Emergency Services	83	15.7
	Other (such as policlinic)	38	7.2

Note. Min: Minimum, Max: Maximum, SD: Standard deviation

Results

The mean age of the 529 nurses who participated in the study was 36.55±9.29 years; 22.3% (n=118) of the nurses were between the ages of 26-30 years, and 91.1% (n=482) were females. The average work experience of the nurses in the institution where the study was conducted was 12.61±9.56 years, and the average years of experience in the profession was 14.41±9.82 years. Moreover, 16.4% (n=87) of the nurses were in the management position, 53.4% (n=277) were in surgical units, and 50.3% (n=266) were employed as clinical nurses (Table 1).

The total mean AEBNQ score and subscale scores of the nurses included in the study are presented in Table 2. When the attitudes of the nurses toward evidence-based nursing were examined, the total mean AEBNQ score was 58.23±9.34, the beliefs and expectations toward Evidence-Based Nursing Subscale mean score was 27.31±5.17, the evidence-based practice intention subscale mean score was 15.12±2.69, and the emotions related to The Evidence-Based Nursing Subscale mean score was 15.80±3.03.

There was no significant difference between total mean AEBNQ scores regarding the age groups of the nurses ($p>0.05$); the emotions related to the evidence-based nursing subscale mean scores of the nurses aged between 41 and 45 years were not statistically significant but were significantly higher ($p>0.05$).

Female nurses' total mean AEBNQ scores and beliefs and expectations toward evidence-based nursing, evidence-based practice intention, and emotions related to evidence-based nursing subscale scores were found to be significantly higher than those of male nurses ($p=0.001$, $p<0.01$; $p=0.016$, $p<0.05$; $p=0.005$, $p<0.01$; $p=0.001$, $p<0.01$, respectively) (Table 3).

Table 2
Distribution of Attitude toward Evidence-Based Nursing Questionnaire Subscale and Total Score and Evaluation of Internal Consistency

Subscale	Item number	Min-Max (median)	M±SD	Cronbach's α
Belief and Expectations	7	7-35 (28)	27.31±5.17	0.921
Practice Intention	4	7-20 (15)	15.12±2.69	0.684
Emotions	4	4-20 (16)	15.80±3.03	0.785
Total Score	15	25-75 (58)	58.23±9.34	0.913

Note. Min: Minimum, Max: Maximum, SD: Standard deviation

Table 3
Distribution of Attitude toward Evidence-Based Nursing Questionnaire Subscale and Total Scores according to the Age and Gender of the Nurses

	Attitude Toward Evidence-Based Nursing Questionnaire			
Characteristics	**Belief and Expectations**	**Practice Intention**	**Emotions**	**Total Score**
Age (years)				
≤25	26.46±5.67	14.56±3.01	15.46±3.54	56.48±10.41
26–30	26.51±5.53	15.07±2.71	15.67±3.10	57.25±9.88
31–35	27.31±5.66	14.98±2.71	15.72±3.29	58.01±9.49
36–40	28.08±5.10	15.52±2.47	16.24±2.63	59.84±8.77
41–45	28.17±4.51	15.57±2.62	16.51±2.57	60.26±8.85
≥46	27.32±4.31	14.9±2.68	15.17±2.94	57.39±8.43
Test value	χ^2:8.595	F:1.506	χ^2:10.730	F:2.127
p	[a]0.126	[b]0.186	[a]0.057	[b]0.061
Gender				
Female	27.54±4.92	15.23±2.64	15.96±2.92	58.73±9.11
Male	24.98±6.87	14.06±2.97	14.09±3.61	53.13±10.23
Test value	Z:−2.400	t: 2.843	Z: −3.484	t: 3.977
p	[c]0.016*	[d]0.005**	[c]0.001**	[d]0.001**

Note. [a]Kruskal–Wallis test, [b]One-way analysis of variance, [c]Mann–Whitney U test, [d]Student's t test, *p<0.05, **p<0.01

There was no statistically significant difference between the total mean AEBNQ score and the subscale scores of the nurses regarding the years of experience in the profession and in the institution and the position of management (p>0.05). However, the total mean AEBNQ score, the beliefs and expectations toward evidence-based nursing, and the evidence-based practice intention subscale scores of the nurses working in the internal diseases departments were found to be significantly higher than those of the nurses working in the surgical departments (p=0.001, p<0.01; p=0.008, p<0.01, respectively) (Table 4).

Regarding the unit, there was no statistically significant difference between the nurses' AEBNQ total score and evidence-based practice intention and emotions related to Evidence-Based Nursing Subscale scores (p>0.05), whereas there was a statistically significant difference between the AEBNQ total score and beliefs and expectations toward evidence-based nursing subscale score (p=0.037; p<0.05). According to the Bonferroni-corrected Mann–Whitney U test results, the beliefs and expectations toward Evidence-Based Nursing Subscale Score of the nurses working in the intensive care unit was significantly higher than that of the nurses working in the operating room (p=0.037; p<0.05) (Table 4).

Discussion

Today, more emphasis is placed on evidence-based nursing practices in improving the quality of care. However, it is stated in the literature that finding the best practice evidence alone is not sufficient to change the applications (Rycroft-Malone et al., 2004). One of the important reasons of the problem related to the evidence-based practices including very complex dimensions is accepted as the attitudes and perceptions of the practitioners (Estabrooks et al., 2007). In this regard, we determined the attitudes of nurses working in a university hospital toward evidence-based nursing, and it was clear that the total mean AEBNQ score of the nurses was 58.23±9.34, and their attitudes toward evidence-based nursing were moderate, in other words, positive. When the results of the study conducted with a similar scale in our country were examined, it was observed that the total mean score of the scale varied between 46.36±3.95 and 57.35±9.45, and the attitudes of the nurses toward evidence-based nursing were positive (Daştan et al., 2018; Dikmen et al., 2018; Yılmaz & Gürler, 2017; Yılmaz et al., 2018;). The positive attitudes of the nurses will contribute to the increase in the quality of nursing care offered to the patients by transferring the results of the research into practice.

Table 4
Distribution of Attitude toward Evidence-Based Nursing Questionnaire Subscale and Total Scores according to the Characteristics of the Profession of the Nurses

	Attitude Toward Evidence-Based Nursing Questionnaire			
Characteristics	**Belief and Expectations**	**Practice Intention**	**Emotions**	**Total Score**
Experience in The Profession (years)				
≤5	26.84±5.25	14.93±2.88	15.56±3.34	57.33±9.71
6–10	26.98±5.9	15.06±2.86	15.8±3.18	57.84±10.23
11–15	26.63±5.92	15±2.36	15.66±3.15	57.29±9.49
16–20	28.01±4.36	15.53±2.55	16.46±2.6	60±8.43
21–25	28.38±4.57	15.37±2.5	16.35±2.39	60.1±8.54
≥26	27.45±4.18	15.02±2.69	15.18±2.97	57.65±8.42
Test value	χ^2:5.684	F:0.610	χ^2:9.820	F:1.519
p	[a]0.338	[b]0.693	[a]0.080	[b]0.182
Work Experience in The Institution (years)				
≤5	26.71±5.4	14.89±2.88	15.51±3.35	57.11±9.79
6–10	26.99±6.02	15.16±2.7	15.92±3.07	58.07±10.07
11–15	27.87±4.48	14.94±2.51	16.29±2.7	59.1±8.51
16–20	28.1±4.59	15.73±2.42	16.33±2.6	60.17±8.45
21–25	27.81±4.67	15.4±2.56	16.11±2.51	59.32±9
≥26	27.72±4.13	15.12±2.71	15.17±3.03	58.01±8.42
Test value	χ^2:4.307	F:0.874	χ^2:7.759	F:1.108
p	[a]0.506	[b]0.498	[a]0.170	[b]0.355
Position of Management				
Yes	27.66±5.67	15.43±2.64	16.08±3.13	59.16±9.83
No	27.24±5.07	15.06±2.7	15,74±3.01	58.05±9.24
Test value	Z: −1.065	t: 1.146	Z: −1.130	t: 1.019
p	[c]0.287	[d]0.252	[c]0.258	[d]0.309
Department				
Surgery	26.52±5.53	14.83±2.66	15.57±3.08	56.92±9.49
Internal Diseases	28.17±4.59	15.45±2.7	16.05±2.96	59.67±8.97
Test value	Z: −3.443	t: −2.667	Z: −1.844	t: −3.421
p	[c]0.001**	[d]0.008**	[c]0.065	[d]0.001**
Unit				
Service	27.23±5.38	15.17±2.73	15.73±3.14	58.12±9.54
Intensive Care	28.34±5.01	15.59±2.6	16.33±2.98	60.26±9.46
Operating Room	26.11±5.07	14.3±2.21	15.48±2.52	55.89±8.09
Emergency	27.05±5.16	15.08±2.76	15.88±2.84	58.01±9.63
Other	27.18±3.8	14.61±2.82	15.13±3.19	56.92±7.54
Test value	χ^2: 10.184	F: 2.179	χ^2: 5.914	F: 2.068
p	[a]0.037*	[b]0.070	[a]0.206	[b]0.084

Note. [a]Kruskal–Wallis test, [b]One-way analysis of variance, [c]Mann–Whitney U test, [d]Student's t test, *p<0.05, **p<0.01

Although the attitudes of the nurses toward evidence-based nursing were positive according to the research results, there are studies showing that attitude does not turn into behavior in implementation (Karki, et al., 2015; Stokke et al., 2014). Özsoy and Ardahan (2008) stated that although majority of the nurses stated that the practices should be evidence based and that the evidence should be obtained from the researches, it was indicated that in practice, evidence such as experiences, intuitions, discussions, and observations that was not based on research were used. In the study conducted by Yılmaz and Gürler (2017), it was concluded that although nurses have positive attitudes toward evidence-based practices, the rate of using research results in patient care is very low. In another study, the most important reasons preventing the nurses from practicing the research results were listed as follows: inadequate facilities, lack of a central unit in which nursing information is collected, and nurses not having time to follow the research (Öztürk et al., 2010). When these results are considered, it is observed that although the attitude is positive, there is a problem in the behaviors of nurses in putting the evidence into practice, and more comprehensive studies are needed.

In this study, the attitudes of female nurses toward evidence-based nursing were found to be higher than those of male nurses. The results of the research conducted by Dikmen et al. (2018) are similar to those of this study. This finding may be due to the fact that the number of male nurses participating in the study was lower than that of the female nurses. In this study, it was determined that the age group of the nurses did not affect their attitudes toward evidence-based nursing. Although there are studies supporting these findings (Dikmen et al., 2018; Mehrdad et al., 2012; Ruzafa-Martinez et al., 2011; Yılmaz et al., 2018), in another study, it was found that the mean AEBNQ scores were higher in nurses younger than 40 years of age. It was stated that this situation may be related to the fact that the education received is more clearly remembered in the newly graduated nurses, and evidence-based practice was introduced into nursing education in recent years (Yılmaz et al., 2018). However, it was concluded that the evidence of age and experience in the profession positively affected the attitude (Özdemir et al., 2009; Xie et al., 2017).

In this study, no relationship was found between the nurses' years of experience in the profession and their attitudes toward evidence-based nursing practices. In similar studies, it was determined that the working experience in the profession did not affect the attitude (Dikmen et al., 2018; Ruzafa-Martinez et al., 2011; Yılmaz et al., 2018). In contrast, there are other studies showing that work experience in the profession has a positive effect on attitude (Zhou et al., 2017; Xie et al., 2017). In a similar study, it was stated that the attitudes toward evidence-based nursing were higher among those who spent <10 years in the profession (Yılmaz et al., 2018). These different findings may be due to some factors such as research population and the work load.

In this study, it was determined that the position of management did not affect the attitude toward evidence-based nursing. However, total attitudes and beliefs and expectations toward evidence-based nursing and evidence-based practice intention subscale attitude levels of the nurses working in the internal diseases departments were higher than those of the nurses working in the surgical departments. The attitude of the nurses was not affected according to the unit; however, beliefs and expectations toward evidence-based nursing subscale scores of the nurses working in the intensive care unit were higher than those of the nurses working in the operating room. In similar studies, it was found that nurses working in the intensive care unit had higher scores in attitude toward evidence-based nursing (AbuRuz et al., 2017; Yılmaz et al., 2018). This finding was interpreted as follows: the attitudes of the nurses working in intensive care units toward evidence-based nursing were more positive than those of the nurses working in other units because of the more widespread use of current practices in these units in the care of critically ill patients (Yılmaz et al., 2018). In the study conducted by Yılmaz et al. (2018), it was found that the attitudes of the nurses toward evidence-based nursing were not affected by the clinic type and the practice intention subscale mean scores of the nurses working as the number of registered nurses was higher than those of the chief nurses. This finding may be due to the fact that the nurses who are part of the student education need to keep their information up-to-date because the hospital where the study was conducted is a university hospital, and therefore follow the current information and give importance to the evidence-based practices.

Study Limitations

The study being conducted in a single hospital and the questions in the data collection forms being

based on the expressions of the nurses were considered the biggest limitation of the study. Therefore, the findings acquired from this study are for the nurses working in the hospital where the research was conducted, and the results obtained cannot be generalized to all the nurses.

Conclusion and Recommendations

In this study, the attitudes of the nurses toward evidence-based nursing were found to be positive. It was concluded that the attitudes toward evidence-based nursing were influenced by the department and female sex. However, it was determined that age, unit, and position of management did not affect the attitude. The result of the study suggests that the knowledge of attitudes toward evidence-based nursing and the factors affecting it are very important for developing appropriate strategies to implement strong evidence-based research results. Furthermore, an important step toward professionalization and professional satisfaction will be taken when the nurses use good evidence effectively in the clinical decision-making process while implementing their independent roles. In this process, it is important to raise awareness with in-service training programs, provide financial support and administrative permission for scientific activities such as congress-symposium, increase motivation in conducting research, following research results, and using results with strong evidence.

Ethics Committee Approval: This study was approved by Ethics committee of Istanbul University (Approval No: 2018-995).

Informed Consent: Verbal and written informed consent was obtained from the patients who agreed to take part in the study.

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