Samsun Sağlık Bilimleri Dergisi 2021;6(1):147-155
Journal of Samsun Health Sciences DOİ: 10.47115/jshs.912916

ATTITUDES TOWARDS EVIDENCE-BASED NURSING AND BARRIERS AGAINST UTILIZING RESEARCH: THE CASE OF PEDIATRICS NURSES

Kanıta Dayalı Hemşireliğe Yönelik Tutum Ve Araştırma Kullanım Engelleri: Pediatri Hemşireleri Örneği

Emel ODABAŞOĞLU[1], Esra TURAL BÜYÜK[2], Nihal ÜNALDI BAYDIN[3]

ABSTRACT

Objective: *This study was carried out with the aim of determining the attitudes of nurses working in the pediatrics clinics towards evidence-based nursing and the barriers they encounter while trying to utilize research.*

Methods: *This research is a descriptive and cross-sectional study. Study was conducted in the pediatrics clinics of two big public hospitals located in a metropolitan city in the northern region of Turkey. The sample of the study consists of 244 nurses. A Personal Information Form, the Barriers to Research Utilization Scale (BRUS), and the Attitude Towards Evidence-Based Nursing Questionnaire (ATEBNQ) were used as data collection instruments.*

Results: *It was determined that 67.6% of the nurses did not participate in any scientific event. It was found that the total average BRUS score of the nurses included in the study was 46.80±2.99 and the total average ATEBNQ score was 58.11±16.29. It was determined that the most important barrier in the use of research by nurses was "Not enough time to read scientific studies because of work" (46.3%). It was seen that there is a statistically significant difference between the total score averages of the research utilization scale and the working duration time and the workload they have (p <0.05). In addition, statistically significant differences were found between the level of participation in scientific activities and the type of these activities, and the total mean ATEBNQ scores (p <0.05).*

Conclusion and Suggestions: *In this study, it was determined that nurses' attitudes towards evidence-based nursing and their perceived barriers against utilizing from their research were moderate; however, the majority of the nurses stated that they did not participate in scientific events, did not review the literature, did not try to bring an evidence-based approach to clinical practice, and that they did not consider themselves competent on this matter. It was determined that most of the barriers against the use of scientific studies in nursing practices stem from nurses and institutions.*

Keywords: *Evidence-based practic;, Research utilization; Nurse; Pediatric.*

ÖZET

Amaç: *Bu araştırma Türkiye'deki pediatri kliniklerinde çalışan hemşirelerin kanıta dayalı hemşireliğe yönelik tutumları ve araştırma kullanım engellerini belirlemek amacıyla gerçekleştirildi.*

Yöntem: *Bu araştırma, tanımlayıcı ve kesitsel bir çalışmadır. Araştırma Türkiye'nin kuzey bölgesinde büyük bir şehirde kamuya bağlı iki büyük hastanede yer alan pediatri kliniklerinde gerçekleştirildi. Araştırmanın örneklemini 244 hemşire oluşturdu. Veri toplama araçları olarak Kişisel Bilgi Formu, Araştırma Kullanımının Önündeki Engeller Ölçeği (HAYEÖ) ve Kanıta Dayalı Hemşirelik Anketi (KDHYTÖ) kullanıldı.*

Bulgular: *Hemşirelerin% 67,6'sının herhangi bir bilimsel etkinliğe katılmadığı belirlendi. Çalışmaya dahil edilen hemşirelerin KDHYTÖ toplam puan ortalamasının 46.80 ± 2.99 ve HAYEÖ toplam puan ortalamasının 58.11 ± 16.29 olduğu bulundu. Hemşirelerin araştırmaları kullanmalarında en önemli engelin 'İş yerinde araştırmaları okumak için yeterli zaman olmaması' (%46.3) olduğu belirlendi. Araştırmadan yararlanmada engeller ölçeği toplam puan ortalamaları ile çalışma süresi ve sahip oldukları pozisyon arasında istatistiksel olarak anlamlı bir fark olduğu görülmüştür (p <0.05). Ayrıca hemşirelik ile ilgili herhangi bir bilimsel etkinliğe katılma durumu ve bilimsel etkinlik şekli ile kanıta dayalı hemşireliğe yönelik tutum ölçeği toplam puan ortalamaları arasında istatistiksel olarak anlamlı farklılıklar bulundu (p<0.05).*

Sonuçlar ve Öneriler: *Bu çalışmada hemşirelerin kanıta dayalı hemşireliğe yönelik tutumları ve araştırmalarından yararlanmada algıladıkları engellerin orta düzeyde olmasına rağmen, hemşirelerin çoğunluğunun bilimsel bir etkinliğe katılmadıkları, literatürde kanıt aramadıkları, kanıta dayalı bir uygulamanın çalışma ortamına getirilmesine katkıda bulunmadıkları ve bu konuda kendilerini yeterli bulmadıkları belirlenmiştir. Hemşirelerin en çok araştırma kullanım engellerinin hemşire ve kurum kaynaklı olduğu tespit edilmiştir.*

Anahtar Kelimeler: *Kanıta dayalı uygulama; Araştırma engelleri; Hemşire; Pediatri*

Makale Geliş / Received: 12.04. 2021
Makale Kabul / Accepted: 22 04.2021

[1]Department of Child Health Nursing, Faculty of Florence Nightingale, İstanbul-Cerrahpaşa University, İstanbul, Turkey ORCİD: 0000-0001-5977-2441, e-posta:emel0545@hotmail.com
[2]Department of Cihld Health Nursing, Faculty of Health Sciences, Ondokuz Mayıs University, Samsun, Turkey ORCİD: 0000-0001-8855-8460, e- posta: esratural55@gmail.com
[3]Department of Nursing Management, Faculty of Health Sciences, Ondokuz Mayıs University, Samsun, Turkey ORCİD: 0000-0002-5074-6922, e- posta: unaldin25@gmail.com
Sorumlu Yazar: Esra TURAL BÜYÜK

1. INTRODUCTION

Evidence-based nursing is defined as including the use of data obtained from scientific research in clinical practice (Center for Evidence-Based Practice, 2013; Donald et al. 2013). This process features informed decision-making, although it varies depending on the characteristics, values, conditions, and preferences of the patient or the healthy individual (Stavor et al. 2017). The American National Academy of Medicine (NAM) aimed to support 90% of all clinical decisions by 2020 with accurate, timely and up-to-date clinical information reflecting the best evidence available (Stavor et al. 2017; Jun et al., 2020). However, it was stated in the studies in the literature conducted in the period until the year 2020 that the prevalence rate of evidence-based nursing practice was well below 90% (Alsulami et al., 2014; Ding et al., 2017). In a study conducted in the United States, it was found that only 20% of nurses used evidence-based nursing practices in surgical wound care (Ding et al., 2017), and in yet another study, only about 30% of pediatric nurses were found to use evidencebased nursing practices in pediatric drug therapy (Alsulami et al., 2014).

Today, although the usefulness of evidence-based nursing practice was demonstrated in various studies, there are significant barriers to evidence-based nursing becoming a standard approach in patient care around the world. These barriers include negative attitudes towards research and evidence-based nursing practices, insufficient knowledge, beliefs and skills, heavy workload, insufficient time, misperceptions that evidence-based nursing takes too much time, weak organizational culture, institutional policies and lack of resources, unqualified nurse leaders, and the lack of executive support (Al Khalaileh et al, 2016; Hweidi et al., 2017).

In addition to their caregiver roles, nurses also play the role of the researcher while providing health services to patients or healthy individuals (Mohamed et al. 2015; Cidoncha-Moreno, 2017; Hweidi et al., 2017). The primary purpose of the use of scientific studies in nursing is to provide patients with high-quality nursing care. It is also important in terms of strengthening and improving nursing practices and contributing to the professionalization of the nurses by enabling them to make decisions based on evidence rather than experience (Hweidi & Tawelbe, 2017; Moe & Enmarker, 2020) . Issues such as care safety in pediatric nursing, reduction of medication errors for the well-being of the child and family, pain management, and best care practices for children in need of complex care have been prominent research topics in the literature, and changes have been made in practice in line with the findings of these studies (Sawin et. al., 2012; Mörelius et al., 2020). It was stated that in order to offer the best nursing practices to hospitalized children and their families continuously and to meet their healthcare needs, nurses should provide evidence-based nursing practices that they learned during their education and with experience and utilize scientific research (Mörelius et al., 2020; Rossi, 2020). However, in Turkey, little data are available regarding the attitudes of pediatrics nurses towards evidence-based nursing and the use of scientific studies in clinical practice.

This study was carried out in the northern part of Turkey with the aim of determining the attitudes of nurses working in the pediatrics clinicstowards evidence-based nursing and the barriers they encounter while trying to utilize research.

In this study, the following questions will be answered in line with this purpose:

- What are the nurses' opinions on scientific activities and evidence-based studies?
- How are the nurses' attitudes towards evidence-based on ursing?
- What is the level of barrier perception of nurses in benefiting from scientific studies?
- What are the most common barriers against nurses utilizing nursing research?
- Is there a difference between the personal and professional characteristics of the nurses and their attitudes towards evidence-based nursing?
- Is there a difference between the socio-demographic and professional characteristics of nurses and their attitude towards change?

2. METHODS

2.1. Design, Study Setting and Sample

This research is a descriptive and cross-sectional study. The study was conducted in the pediatrics clinics of a university hospital and a training and research hospital located in a metropolitan in the northern part of Turkey between 6 and 30 April 2020. The population of the study consisted of 268 nurses working in these clinics and meeting the participation criteria (having worked for at least one year, working in the pediatric clinic). No sampling method was used, the whole population was tried to be reached and 244 nurses constituted the sample. The rate of participation in the research is 91%.

2.2. Data collection

In the study, a Personal Information Form developed in line with the data obtained from the literature by the researchers, t he Attitude towards Evidence-Based Nursing Questionnaire (ATEBNQ), and the Barriers to Research Utilization Scale (BRUS) were used to collect data**.**

Personal Information Form; It consists of a total of 12 questions aimed at determining the sociodemographic and professional characteristics of nurses and their use of scientific research in their practice.

Attitude Towards Evidence-based Nursing Questionnaire (ATEBNQ);The Turkish validity and reliability test of the scale, which was developed by Ruzafa-Martinez et al. (2011), was carried out by Ayhan (2015). The scale consists of a total of 15 items in fivepoint Likert type and three sub-dimensions. Eight items contain positive and seven negative statements, and negative items are reversed and coded. The beliefs and expectations towards evidence-based nursing sub-dimension includes items related to nurses' beliefs and expectations about the benefits of evidence-based nursing in clinical practices (Items 1, 2, 7, 9, 11, 13, 14). The evidence-based practice intention sub-dimension features items regarding nurses' behavior or intention to do evidence-based practices, their perceived barriers, workload, and the use of time allocated for education for evidence-based nursing (Items 3, 5, 6, 12). The emotions related to evidence-based nursing sub-dimension features items regarding the importance attached to evidence-based nursing, the benefits of evidence-based nursing in clinical practice, and nurses' feelings about evidence-based nursing (Items 4, 8, 10, 15). A minimum of 15 and a maximum of 75 points can be obtained from the scale. Higher scores indicate that evidence-based attitude towards nursing is positive. Cronbach's Alpha reliability coefficient of the scaleis .90. In this study, the Cronbach's Alpha reliability coefficient of the scale was found to be .94.

Barriers to Research Utilization Scale (BRUS);The Turkish validity and reliability test of the scale, which was developed by Funk, Champagne, Wiese, and Tornquist (1991), was conducted by Bayık et al. (2009). BRUS is a 29-item scale aimed at identifying the barriers that affect nurses' utilization of scientific research in their practice. BRUS is a five-point Likert type consisting of four sub-dimensions, namely the nurse (the nurse's research values, skills, and awareness, nine items); the organization/the place of work (setting, barriers, and limitations, eight items); the study (the quality of the research, six items); and the communication (the presentation and accessibility of the research, six items). Responses to the scale range from 1 (no barrier) to 4 (many barriers). The overall mean score of the scale is between 0 and 120. The evaluation of the scale is based on the percentages of the mean scores of the nurses' responses to the items. The higher the average score obtained from the scale, the more the items in the scale are perceived as obstacles. While Bayık et al. (2009) found that the sub-dimensions of the scale had Cronbach alpha coefficients between .73 and .80, Cronbach's Alpha coefficients in this study were found to be between 0.62 and 0.89.

Statistical Analysis

The data obtained from the study were evaluated in SPSS 20 program (SPSS Inc, ChicagoIl, USA).The frequencies and percentages of nurses were used to analyze their sociodemographic characteristics during data analysis. Firstly, the Kolmogorov-Smirnov test was used to determine whether the data was distributed normally. Number, percentage, mean, standard deviation and median were used as descriptive statistics; parametric tests (the Independent Two-Sample t-test, one-way analysis of variance (ANOVA) and the Tukey test) were used to analyze the data with normal distribution. For all the analyses, a $p<0.05$ was considered to be statistically significant.

2.3. Ethical Considerations

The study was conducted after formal permissions for the study were obtained from the Directorates of the Hospitals and the Ethic Commission of university hospital (IRB file no: OMU-KAEK 2020-/126, Date:28.02.2020). Before the launch of the research, nurses were informed about the subject and the objectives of the research. Personal information would remain confidential and would only be used for the research data. Written permission (Google survey) were obtained from the nurses who volunteered to participate in the research.

3. RESULTS

It was determined that 56.6% of the nurses were working in a public hospital, 46.3% were aged 41 and over, 96.5% were female, 73.9% were married, and 73.4% were bachelor's degree. It was determined that 39.3% of the participants had a professional experience of 21 years or more and 91.8% were working as clinical nurses (Table 1).

Table 1. Distribution of Personal and Professional Characteristics of Nurses (n=244)

Characteristics	Sub-characteristics	Number (n)	Percentage (%)
Institution	Public hospital	138	56.6
	University hospital	106	43.4
Age (year)	19-30	41	16.8
	31-40	90	36.9
	41 and older	113	46.3
Gender	Female	233	95.5
	Male	11	4.5
Marital status	Married	193	79.1
	Single	51	20.9
Educational status	Associate Degree	49	20.1
	Bachelor's Degree	179	73.4
	Master's Degree	16	6.6
Occupational experience	1-10 years	61	25.0
	11-20 years	87	35.7
	21 years and above	96	39.3
Position	Clinic nurse	224	91.8
	Chief nurse	20	8.2

In the study, 67.6% of the nurses stated that they did not participate in any scientific event and 24.2% stated that they attended a scientific event as a listener. The study show that 77% of the participants stated that they did not try to bring an evidence-based approach to the carrying out of clinical practices to improve these practices. In addition, 69.7% of the participants stated that they did not review the literature to improve nursing practices, and 45.5% stated that they felt somewhat competent in searching, finding, and evaluating evidence (Table 2).

Table 2.Nurses' Views on Scientific Competency and Evidence-Based Studies

Characteristics		n	%
Participating in a scientific event related to nursing	Yes	79	32.4
	No	165	67.6
The manner of participation in the scientific event	Listener	59	24.2
	Submitting a paper	20	8.2
Bringing an evidence-based approach to the carrying out of clinical practice to improve these practices	Yes	56	23.0
	No	188	77.0
Reviewing the literature to improve nursing practices	Yes	74	30.3
	No	170	69.7
Feeling competent in searching, finding, and evaluating evidence	Very competent	28	11.5
	Competent	111	45.5
	Somewhat competent	105	43.0

It was found that the nurses' total mean ATEBNQ score was 46.80 ± 2.99, the median score was 47, the lowest score was 36, and the highest score was 55. When the mean scores obtained from the sub-dimensions of the scale were ranked from the highest to the lowest, the beliefs and expectations towards evidence-based nursing sub-dimension ranked first, (21.77 ± 2.88), the emotions related to evidence-based nursing sub-dimension ranked second (13.37 ± 2.39), the evidence-based practice intention sub-dimension ranked third (11.66 ± 1.19). It was determined that the nurses' total mean BRUS score was 58.11 ± 16.29, the median score was 60, the lowest score was 0, and the highest score was 120. When the mean scores obtained from the sub-dimensions of the scale were ranked from the highest to the lowest, the nurse sub-dimension ranked first (15.19 ± 4.63); the communication sub-dimension ranked second (13.55 ± 4.47); communication sub-dimension ranked third (12.14 ± 4.74), and the study sub-dimension ranked fourth (11.03 ± 3.17) (Table 3).

Table 3. Descriptive Statistics Regarding the Total Scores and Sub-Dimensions of ATEBNQ and BRUS

Sub-dimensions and scales	Mean±SD	Median	Min.	Max.
Beliefs and expectations towards evidence	21.77±2.88	22.00	14	35
Evidence-based practice intention	11.66±1.19	12.00	8	16
Emotions related to evidence-based nursing	13.37±2.39	14.00	4	18
ATEBNQ Total	46.80±2.99	47.00	36	55
Communication	12.14±4.74	12.00	0	24
Study	11.03±3.17	11.00	2	21
Nurse	15.19±4.63	16.00	0	32
Institution	13.55±4.47	14.00	0	28
BRUS Total	58.11±16.29	60.00	0	120

SD: Standard deviation; Min: Minimum; Max: Maximum; ATEBNQ: Attitude Towards Evidence-based Nursing Questionnaire; BRUS: Barriers to Research Utilization Scale

The five most prevalent moderate and big barriers determined by the participants are "There is not enough time to read scientific studies at work" (46.3%); "Hospital management does not allow the use of the practices described in scientific studies" (38.9%); "Hospital staff do not support the practices described in scientific studies and physicians do not cooperate in such practices." (38.5%); "There is not enough opportunity for evidence-based nursing applications" (37.7%); and "Nurses do not see themselves with enough power to change practices" (37.3%), and it was determined that these expressions belonged to the nurse and organization sub-dimensions (Table 4).

Table 4.Distribution of the Answers of the Participants Regarding the Perceived Moderate and Big Barriers against Evidence-Based Nursing Practices (n = 244)

Scale Sub-dimension	Scale items (Perceived Moderate and Big Barriers against Evidence-Based Nursing Practices)	n (%)
1 Nurse	2- Not enough time to read scientific studies at work	113 (46.3)
2 Institution	27- Hospital management does not allow the use of the practices described in scientific studies	95 (38.9)
3 Institution	5- Hospital staff do not support the practices described in scientific studies	94 (38.5)
	6- Physicians do not cooperate in such practices	94 (38.5)
4 Institution	3- There is not enough opportunity for evidence-based nursing applications	92 (37.7)
5 Nurse	1- Nurses do not see themselves with enough power to change practices	91 (37.3)

No statistically significant difference was found between the institution where the nurses work, age, gender, marital status, and education status, and the total mean ATEBNQ and BRUS scores ($p > 0.05$). A statistically significant difference between the experience of the nurses and BRUS total score averages was found, and the post-hoc test results showed that this difference is due to the BRUS scores nurses working for 21 years or more got and that a difference was found between nurses working for 21 years or more and nurses working for 11 to 20 years (bc; $p = 0.001$). It was determined that there was a statistically significant difference between the position in which the nurses worked in the unit they worked in and their total mean BRUS scores, and the chief nurses had higher total BRUS scores than clinical nurses ($p = 0.020$) (Table 5). Also, it was detected that there is a statistically significant difference between the state of participating in scientific events related to nursing and the form of scientific activity and the mean total ATEBNQ scores and that the nurses participating in such events ($p = 0.000$) and participating in these events by submitting papers have higher mean ATEBNQ scores than other nurses ($p = 0.003$) (Table 5).

Table 5: Comparison of Nurses' Personal and Professional Characteristics and Mean Total ATEBNQ and BRUS Scores

Personal and professional characteristics		Number (n)	Percentage (%)	ATEBNQ Mean ± SD / Test, p		BRUS Mean ± SD / Test, p	
Institution	Public hospital	138	56.6	46.87 ± 3.03	t = 0.438 0.662	58.01 ± 18.27	t = 0.120 0.905
	University hospital	106	43.4	46.70 ± 2.93		58.26 ± 13.31	
Age (year)	19-30	41	16.8	46.22 ± 3.47	F = 1.490 0.227	58.78 ± 18.89	F = 1.649 0.194
	31-40	90	36.9	47.17 ± 2.88		55.69 ± 13.83	
	41 and older	113	46.3	46.72 ± 2.88		59.81 ± 16.98	
Gender	Female	233	95.5	46.85 ± 2.93	t = 1.241 0.226	58.01 ± 16.42	t = -0.449 0.654
	Male	11	4.5	45.73 ± 4.22		60.27 ± 13.48	
Marital status	Married	193	79.1	46.87 ± 2.82	t = 0.640 0.523	57.84 ± 16.89	t = -0.656 0.513
	Single	51	20.9	46.56 ± 3.64		59.54 ± 13.69	
Educational status	Associate Degree	49	20.1	46.43 ± 2.80	F = 2.634 0.074	58.04 ± 12.30	F = 0.594 0.553
	Bachelor's Degree	179	73.4	46.76 ± 3.00		58.51 ± 16.71	
	Master's Degree	16	6.6	48.38 ± 3.18		53.88 ± 21.89	
Occupational experience	1-10 years [a]	61	25.0	46.62±3.33	F=0.246 0.782	58.00±16.87	F=5.402 **0.005
	11- 20 years [b]	87	35.7	46.97 ± 2.78		54.07 ± 16.09	
	21years and above[c]	96	39.3	46.76 ± 2.99		61.85 ± 15.34	
Position	Clinic nurse	224	91.8	46.68 ± 3.06	t = 1.837 0.067	57.25 ± 16.21	t = 2.342 *** **0.020**
	Chief nurse	20	8.2	47.79 ± 2.36		64.89 ± 16.29	
Participating in a scientific event related to nursing	Yes	79	32.4	47.70 ± 2.35	t = 3.579 * **0.000**	57.13 ± 17.78	t = -0.633 0.527
	No	165	67.6	46.39 ± 3.17		58.56 ± 15.60	
The manner of participation in the scientific event	Listener	59	24.2	47.64 ± 2.21	t = 5,826 ** **0.003**	59.24 ± 15.98	t = 2.344 0.098
	Submitting a paper	20	8.2	47.95 ± 2.64		50.65 ± 20.81	

t = Independent two sample t test, F = One-way analysis of variance; a-c: There is no difference between groups with the same letter; * p <0.001 ** p<0.01 *** p<0.05

4. DISCUSSION

In the study, the majority of the nurses stated that they did not participate in scientific events, did not review the literature, did not try to bring an evidence-based approach to clinical practice, and that they did not consider themselves competent on this matter (Table 2). It has been observed in some studies (Maaskant et al., 2013; Mohamed et al, 2015; Öztürk Çopur et al., 2015; Stavor et al., 2017; Rossi et al., 2020) that nurses do nothave sufficient information to conduct scientific research and do not follow the literature. This may be due to the inability of the nurses to receive sufficient managerial support to conduct research because of the busy nature of their work and excessive workload.

It was observed that the nurses' attitudes towards evidence-based nursing were moderate (Table 3). Similarly, although there are studies in the literature in which nurses have moderate attitudes towards evidence-based nursing (Dastan and Hintistan, 2018, Yılmaz et al. 2018),there are also studies in which they show more positive attitudes (Maaskant et al. 2013; Heydari et al. Et al, 2014;Ayhan et al. 2015;Stavor et al., 2017). The different results obtained in other studies may be due to the fact that they were conducted with samples consisting of nurses working in different regions and different units.

In this study, it was observed that nurses who attended scientific events had more positive attitudes towards evidence-based nursing than nurses who do not. Similar results were obtained in some studies (Ayhan et al. 2015; Stavor et al., 2017; Pereira et al., 2018). This made us think that nurses who conduct scientific research learned the importance of evidence-based practices on their own while doing research, and that the learning about evidence-based practices from other colleagues in scientific events they attended may also be effective in their positive attitudes.

In the study, the majority of the nurses stated that they did not regard themselves as competent in searching, finding, and evaluating evidence in the literature. Nurses who stated that they lacked knowledge about research (choosing a research topic, literature review, and synthesis of research findings, etc.) think that this lack creates barriers against utilizing the findings of scientific studies and that learning about research methods and being able to critically evaluate research reports would facilitate the implementation of the practices put forward in these studies. (Stavor et al, 2017; Moe & Enmarker, 2020; Rossi et al. 2020). In their study participated by pediatrics nurses and physicians, Maaskant et al. (2013) suggested that research summaries should be published in the mother tongue, regular information about the use of the literature should be provided, and research should be supported by hospital executives and experts. In studies conducted to determine the research priorities of pediatric nurses, it was emphasized that the research interest of nurses is also important in turning research findings into routine practice (Sawin et al., 2012; Tume et al., 2015; Rossi et al., 2020).

In this study, it was found that the nurses encountered moderate barriers against the utilization of scientific studies. Some studies showed that nurses encounter big barriers in benefiting from research (Bahar et al., 2015; Al Khalaileh et al., 2017). The different results obtained from the studies may be due to the differences in the institutions where nurses work (opportunities, support, variety of duties and powers, etc.) and the fact that these studies were conducted with samples consisting of nurses working in different units. It was determined that the factors perceived as biggest obstacnes were nurse and institution-related, mostly due to the limited time, lack of opportunities and support, lack of cooperation with physicians, and the nurses' lack of power to change practices. In a study conducted with pediatrics nurses, it was determined that nurses thinking that they do not have the power to change the practices, the absence of a central unit where the information specific to the nursing field was collected, and the lack of sufficient time to implement new practices were the barriers against utilizing from scientific studies (Başbakkal et al, 2015). Similarly, in other studies, it was stated that the biggest barriers against nurses' evidencebased practices stem from institutional factors (lack of staff support, workload, lack of authority to change management and practice), lack of time, and lack of information (lack of ability to criticize or synthesize the literature, etc.) (Maaskant et al., 2013; Arslan et al., 2015; Al Khalaileh et al., 2017; Cidoncha- Morenoa et al., 2017; Hweidi et al., 2017; Yılmaz et al., 2018, Mahmouda and Abdelrasolb, 2019; Rossi et al., 2020). The financial and moral support of the executives and top management is always important in ensuring employee motivation. Teamwork and effective leadership are also necessary for directing employees to a job.

In addition, although it seems very natural that nurses cannot research because of the lack of time and current excessive workload in the health services, it can be thought that if nurses act in a way that appreciates their researcher role in performing nursing practices, they will not consider researching a time-consuming action.

It was observed that chief nurses encounter more barriers against the use of scientific studies. Chief nurses play a key role in providing a working environment that facilitates the creation of a research utilization culture in an institution. Öztürk Yıldırım and Karadağ (2016) determined that the chief nurses' perceptions of barriers against the use of research are mostly influenced by their values, skills, and awareness in research and that chief nurses are effective in providing the necessary managerial support and putting the research results into practice (Öztürk Yıldırım & Karadağ, 2016). The professional experiences of the chief nurses and their interactions with clinical nurses in the hospital may lead them to contemplate more on the use of scientific studies. Also, the lack of support from top management and physician nurse cooperation, as well as the dominance of physicians in the treatment process and that nurses cannot act independently in this process, pushes us to think that nurses hold themselves back from utilizing scientific studies and perceive these situations as barriers against the application of the findings of scientific studies. It was observed in this study that the duration of nurses' professional experience affected their perception of the use of research, and especially nurses who have more than twenty years of experience are affected by the barriers against the use of scientific studies more. Similarly, in some studies, it was observed that as the duration of professional experience of nurses increases, the extent to which they are affected by the barriers against the use of scientific studies increases as well (Cidoncha-Morenoa et al., 2017; Mahmouda & Abdelrasolb, 2019). This suggests that nurses with more than 20 years of professional experience were not taught the importance of scientific research during their vocational education and that they do not have sufficient awareness about doing research and using research data.

Study Limitations

There are some limitations to the research. The first is, although the majority of contacted pediatrics nurses participated in this study, the entire population could not be reached due to some nurses being sick and some being on a leave of absence. The second is that the participants' responses to data collection tools are based on their own opinions. Finally, the study is limited to sampling consisting only of nurses working in the North Anatolian region, and the findings cannot be generalized in terms of the entire country.

CONCLUSION

In this study, it was determined that nurses' attitudes towards evidence-based nursing and their perceived barriers against utilizing from their research were moderate; however, the majority of the nurses stated that they did not participate in scientific events, did not review the literature, did not try to bring an evidence-based approach to clinical practice, and that they did not consider themselves competent on this matter. It was determined that most of the barriers against the use of scientific studies in nursing practices stem from nurses and institutions. It has been observed that nurses' duration of experience and positions affect their perception of barriers against the utilization of research in nursing practices. It was determined that nurses who have experience in evidence-based practices and feel competent in this regard have more positive attitudes towards evidence-based nursing.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Conflict of interest

The study did not receive financial support from any source. The authors have no conflicts of interest.

Authorship Contributions

Concept: E.TB., N.ÜB, Design: E.O., E.TB., N.ÜB, Data Collection or Processing: E.O., E.TB., N.ÜB Analysis or Interpretation: E.O., E.TB., N.ÜB, Literature Search: E.O., E.TB., N.ÜB. Writing:.E.O., E.TB., N.ÜB.

REFERENCES

Al Khalaileh, M., Al Qadire, M., Musa, AS.,Al-Khawaldeh, OA., Al Qudah, H., HRN., & Alhabahbeh, A.(2016). Closing the gap between research evidence and clinical practice: Jordanian nurses' perceived barriers to research utilisation. Journal of Education and Practice, 7(8), 52-57.

Alsulami, Z., Choonara. I., & Conroy. S. (2013). Pediatric nurses' adherence to the double-checking process during medication administration in a children's hospital: An observational study. Journal of Advanced Nursing, 70(6), 1404–1413. doi: 10.1111/jan.12303.

Ayhan, Y., Kocaman, G.,& Bektaş, M. (2015). The validity and reliability of attitude towards evidencebased nursing questionnaire for Turkish. Hemşirelikte Araştırma Geliştirme Dergisi. 17(2-3), 21-35.

Bahar, Z., Gözüm, S., Beşer, A., Çapık, C., Kıssal, A.,& Gördes, N. (2015). Barriers to and factors affecting use of research findings by nurses ın university hospitals ın two different regions of Turkey. Dokuz Eylul University E-Journal of Nursing Faculty, 8 (4), 232-240.

Başbakkal, Z., Beytut. D., Muslu. GK., Ersun. A.,& Özçelik. M. (2013). An analysis of the effects of job attitudes of pediatric ıntensive care nurses on barriers to research utilization. Dokuz Eylul University E-Journal of Nursing Faculty. 6 (2), 75-81.

Bayık, TA., Uysal, A., Ardahan, M., & Özkahraman, Ş. (2009). Barriers to research utilization scale: psychometric properties of the Turkish version. Journal of Advanced Nursing, 66, 456464. doi:10.1111/j.1365-2648.2009.05162.

Centre for Evidence-Based Practice. University of Toronto Health Network. 2013.http://www.cebin.u.torontocal/syllas/nur/intro/htm.

Cidoncha-Moreno, MÁ., & Alegría-Fernandez de Retana, BR. (2017). Barriers to the implementation of research perceived by nurses from Osakidetza. Enfermería Clínica. 27 (5), 286–293. doi: 10.1016/j.enfcli.2017.03.015.

Daştan, B.,& Hintistan, S. (2018). Determination of the attitudes of nurses working in ınternal clinics for evidence based nursing: Rural region example. Ordu University Journal of Nursing Studies, 1(1),1-9.

Ding, S., Lin, F., Marshall, AP.,& Gillespie, BM. (2017). Nurses' practice in preventing postoperative wound infections: An observational study. Journal of Wound Care 26(1),28–37. doi: 10.12968/jowc.2017.26.1.28.

Donald, F., Martin-Misener, R., Carter, N., Donald, EE., Kaasalainen, S., Wickson- Griffiths, A., …… , DiCenso, A. (2013). A systematic review of the effectiveness of advanced practice nurses in long-term care. Journal of Advanced Nursing, 69(10):2148–61. doi: 10.1111/jan.12140.

Funk, S., Champagne, M., Wiese, R., & Tornquiest, E.(1991). Barriers: the barriers to research utilization scale. Applied Nursing Research, 4(1), 39-45. DOI: 10.1016/s0897-1897(05)80052-7.

Heydari, A., Mazlom, SR., Ranjbar, H., & Scurlock-Evans, L. (2014). A study of Iranian nurses' and midwives' knowledge, attitudes, and implementation of evidence-based practice: The time for change has arrived. Worldviews on Evidence-Based Nursing, 11(5), 325-331.doi: 10.1111/wvn.12052.

Hweidi, IM., Tawalbeh, LI., Al-Hassan, MA., Alayadeh, RM., & Al-Smadi, AM. (2017). Research use of nurses working in the critical care units: barriers and facilitators. Dimensions of Critical Care Nursing, 36(4), 22 6–233. doi: 10.1097/DCC.0000000000000255.

Jun, J., Kovner, CT., Dickson, VV., Stimpfel, AW., & Rosenfeld, P. (2020). Does unit culture matter? The association between unit culture and the use of evidence-based practice among hospital nurses. Applied Nursing Research, 53,151251. doi: 10.1016/j.apnr.2020.151251

Maaskant, JM., Knops, AM., Ubbink, DT.,& Vermeulen, H. (2013). Evidence-based practice: A survey among pediatric nurses and pediatricians. Journal of Pediatric Nursing, 28(2),150-157. doi: 10.1016/j.pedn.2012.05.002.

Mahmouda, MH., Abdelrasol, Z.(2019). Obstacles in employing evidence-based practice by nurses in their clinical settings: A descriptive study. Frontiers of Nursing, 6(2),123-33. doi: 10.2478/FON-2019-0019

Moe, A., & Enmarker, I. (2020). Research utilization in municipality nursing practice in rural districts in Norway: A cross-sectional quantitative questionnaire study. BMC Nursing, 19(1),1-10. doi: 10.1186/s12912-020-00475-1.

Mohamed, NA., Mohamed, HA., & Mohamed, SH. (2015). Evidence-based practice: Barriers and facilitators among nurses. Zagazig Nursing Journal, 11(1), 174–191.

Mörelius, E., Foster, M, & Gill, MJ. (2020). A scoping review of nursing research priorities in pediatric care. Journal of Pediatric Nursing, 52:e57-69. doi: 10.1016/j.pedn.2020.01.006.

Öztürk Yıldırım, T., & Karadağ, M. (2016). The perceptions of nurse managers on their critical thinking skills and research utilization barriers and facilitators. Journal of Health and Nursing Management, 2(3),73-85. doi:10.5222/SHYD.2016.073

Pereira, F., Victoria Pellaux, V., & Verloo, H. (2018). Beliefs and implementation of evidence-based practice among community health nurses: A cross-sectional descriptive study. Journal of Clinical Nursing, 27(9-10), 2052–61. doi: 10.1111/jocn.14348.

Rossi, S., Bagnasco, A., Barisone, M., Bianchi, M., Bressan, V., Timmins, F., …Sasso,L. (2020). Research awareness among children's nurses: An integrative review, Journal of Clinical Nursing, 29(3-4), 290-304. doi: 10.1111/jocn.15068.

Ruzafa-Martinez, M., Lopez-Iborra, L., & Madrigal-Torres, M. (2011). Attitude towards evidence-based nursing questionnaire: development and psychometric testing in Spanish community nurses. Journal of Evaluation in Clinical Practice, 17(4), 664–70. doi: 10.1111/j.1365-2753.2011.01677.x.

Sawin, KJ., Lewin, LC., Niederhauser, VP., Brady, MA., Jones, D.,…. Trent, CA. (2012). A survey of NAPNAP members' clinical and professional research priorities. Journal of Pediatric Health Care, 26(1), 5–15. doi: 10.1016/j.pedhc.2010.04.012.

Stavor, DC., Zedreck-Gonzalez, J., & Hoffmann, RL. (2017). Improving the use of evidence-based practice and research utilization through the ıdentification of barriers to ımplementation in a critical access hospital. The Journal of Nursing Administration, 47(1), 56-61. https://doi.org/10.1097/NNA.0000000000000437

Tume, LN., Coetzee, M., Dryden-Palmer, K., Hickey, P. A., Kinney, S., Latour, J. M., & Curley, M. A. (2015). Pediatric critical care nursing research priorities-initiating international dialogue. Pediatric Critical Care Medicine, 16(6), e174–e182. https://doi.org/10.1097/PCC.0000000000000446.

Yılmaz, D., Düzgün, F., & Dikmen, Y. (2019). An ınvestıgatıon ınto nurses' attıtudes towards evıdence-based nursıng. Acıbadem University Health Sciences Journal, 10(4),713-719. doi:10.31067/0.2018.