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The Relationship Between Neonatal Nurses' Attitudes, Evidence-Based Practice Leadership Evidence Based Practice Work Environment, and the Involvement of Parents on in Family Centered Care Practices: A Cross-Sectional Study*

Yenidoğan Hemşirelerinin Kanıta Dayalı Uygulama Liderliği, Kanıta Dayalı Uygulama Çalışma Ortamı ve Tutumları ile Ebeveynlerin Aile Merkezli Bakım Uygulamalarına Katılımı Arasındaki İlişki: Kesitsel Bir Çalışma

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Abstract

Aim: This study aimed to: a) examine the effects of neonatal intensive care nurses' attitudes towards evidence-based practices and perceptions of evidence-based practices leadership and work environment on attitudes towards parental participation, and (b) determine the effects of such attitudes and perceptions of nurses on parental involvement in neonatal intensive care unit family center care activities.

Method: This cross-sectional study was conducted with 218 neonatal intensive care nurses in Turkey using an online questionnaire. The data were collected using the demographic questionnaire, the Evidence-based Practices Work Environment Scale, the Evidence-based Practices Leadership Scale, the Attitude Towards Evidence-Based Nursing Questionnaire, the Parental Participation Attitude Scale, and the number of parental involvement direct care activities. Data were analyzed with descriptive statistics, Pearson correlation, and multiple regression analysis (backward).

Results: Nurses' attitudes towards parental participation were affected by evidence-based nursing attitudes (R^2=0.35, Durbin-Watson=2.078, p<0.001). The number of parent-delivered interventions related to family center care activities in the neonatal intensive care unit was affected by the evidence-based practices environment and completion of neonatal intensive care unit certification (R^2=0.11, Durbin-Watson=1.972, p<0.001).

Conclusions: Nurses' attitudes towards parental involvement affects by their own evidence-based practices knowledge and awareness. The establishment of an evidence-based practices work environment at the organizational level and the provision of special training for nurses increased parent-delivered interventions.

Keywords: Evidence-based practice, leadership, work environment, nurse attitudes, parental involvement, neonatal intensive nursing.

Öz

Amaç: Bu çalışmanın amacı: a) yenidoğan yoğun bakım hemşirelerinin kanıta dayalı uygulamalara yönelik tutumları ile kanıta dayalı uygulama önderliği ve çalışma ortamı algılarının ebeveyn katılımına yönelik tutumları üzerindeki etkilerini incelemek ve (b) hemşirelerin bu tutum ve algılarının ebeveynlerin yenidoğan yoğun bakımda ünitesindeki aile merkezli bakım uygulamalarına katılımı üzerindeki etkilerini incelemektir.

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Yöntem: Bu kesitsel çalışma, Türkiye'de 218 yenidoğan yoğun bakım hemşiresi ile çevrimiçi bir anket kullanılarak gerçekleştirilmiştir. Veriler; tanıtıcı bilgi formu, "Kanıta Dayalı Uygulama Çalışma Ortamı Ölçeği, Kanıta Dayalı Uygulama Liderlik Ölçeği, Kanıta Dayalı Hemşireliğe Yönelik Tutum Anketi, Ebeveyn Katılımı Tutum Ölçeği" ve ebeveyn katılımı doğrudan bakım girişimlerinin sayısı kullanılarak toplanmıştır. Veriler tanımlayıcı istatistikler, Pearson korelasyonu ve çoklu regresyon analizi (backward) ile analiz edilmiştir.

Bulgular: Hemşirelerin ebeveyn katılımına yönelik tutumları kanıta dayalı hemşirelik tutumlarından etkilenmiştir (R^2=0,35, Durbin-Watson=2,078, p<0,001). Yenidoğan Yoğun Bakım Ünitesi'nde aile merkezli bakım aktiviteleri ile ilgili ebeveyn tarafından uygulanan girişimlerin sayısı EBP ortamından ve yenidoğan yoğun bakım hemşireliği sertifikasyonuna sahip olmaktan etkilenmiştir (R^2=0,11, Durbin-Watson=1,972, p<0,001).

Sonuç: Hemşirelerin ebeveyn katılımına yönelik tutumları kendi kanıta dayalı uygulama bilgi ve farkındalıklarından etkilenmektedir. Örgütsel düzeyde kanıta dayalı uygulama çalışma ortamının oluşturulması ve hemşirelere özel eğitim verilmesi ebeveyn katılımlı girişimleri artırmıştır.

Anahtar Sözcükler: Kanıta dayalı uygulama, liderlik, çalışma ortamı, hemşire tutumları, ebeveyn katılımı, yenidoğan yoğun hemşireliği.

Introduction

The creation and implementation of evidence-based practices remains one of the most important developments in today's complex healthcare environment (Duff et al., 2020; White, 2019). Longton (2014) reported that the lack of evidence-based practice in nursing leads to negative consequences for patients. Constituting approximately half of the healthcare workforce, nurses have the potential to ensure patient care and safety by implementing such practices. The International Council of Nurses (International Council of Nurses, 2012) has stated that the gap between the practice and theory of evidence-based practices (EBP) nursing may be minimized and has recommended that nurses take relevant actions towards this goal.

Over the past 30-40 years, important evidence regarding evidence-based practices in the field of neonatal intensive care has had a great impact on the quality of infant care. In the Neonatal Intensive Care Unit (NICU), Family-Centered Care (FCC) and kangaroo care are examples of such practices. (Davidson et al., 2017; EFCNI, Bergman & Westrup et al., 2018). Studies show that although there is strong evidence that FCC positively impacts infants, families, and health institutions, various obstacles prevent the implementation of evidence-based practices (Austin et al., 2019; Chan et al., 2017; Mirlashari et al., 2020). It may contribute to use of evidence that nurses work in environments encouraging evidence-based practice culture and enhance of their knowledge and attitude toward evidence-based practice (Saunders et al., 2021).

Evidence-based nursing

Evidence-based practice has evolved from the influence of Florence Nightingale in the 1800s to the practice of medical medicine in the 1970s, and to the nursing profession in the late 1990s (Mackey & Bassendowski, 2017). Today, EBP is considered the key to quality improvement in health care. The primary goal of EBP is to provide the best quality nursing care in order to provide optimal outcomes for each unique patient (Schaefer & Welton, 2018; WHO, 2017). It is a problem-solving approach to clinical decision-making that combines key findings from rigorous studies with the expertise of the clinician and incorporates evidence of the values, preferences, and evaluation of each patient (Melnyk et al., 2012). EBP requires nurses to: (a) formulate and ask clinical questions derived from practice, (b) consult various sources for evidence regarding clinical questions, (c) evaluate evidence, (d) possess unique qualifications in their field, and (e) put evidence into practice (Laibhen-Parkes, 2014). While previous studies emphasize the importance of putting evidence-based nursing (EBN) into practice, they also acknowledge the widespread obstacles presented by nurse leadership and organizational structure (Correa et al., 2020; Harper et al., 2017; Lunden et al., 2019; Melnyk et al., 2016; Nguyen & Wilson, 2016; Välimäki et al., 2018; Wilkinson et al., 2011).

Evidence-based practice leadership

Nursing leaders play a strategic role in the sustainability of EBPS (Välimäki et al., 2018). Therefore, strong nurse leaders are needed to alleviate some of the obstacles related to the implementation of EBP. Such leaders should support the development of nurses' practical skills and decision-making processes, mentor other nurses, and establish mutual trust (Saunders et al., 2017). The implementation of EBP leadership is a complex process requiring application of evidence and the implementation of multiple, simultaneous strategies involving nursing staff, organizational culture, and leadership practices (Häggman Laitila et al., 2017). A previous study conducted on the factors facilitating the application of evidence about leadership found that factors such as teamwork (communication between managers and staff nurses), organizational

structures (strategic management), and transformational leadership (readiness for change among leaders and its impact on the application of evidence) were of great importance (Clavijo-Chamorro et al., 2022). In addition, some studies found that nurse managers were obliged to provide a positive work environment for their staff in order to ensure evidence-based practice (Bianchi et al., 2018; Clavijo-Chamorro et al., 2022; Kanninen et al., 2021).

The evidence-based practice work environment
A healthy work environment is vital to the development of nurses' skills and the implementation of evidence-based practices (Bianchi et al., 2018; Cummings et al., 2021). Dimensions of the EBP work environment include culture (support) and climate (resources). Culture is defined as the norms, values, and beliefs within an organization (Pryse et al., 2014). It thus involves a relationship between administrative and organizational behaviors and guides efforts designed to implement EBP (Engle et al., 2021). Culture also concerns the shared expectations and assumptions regarding EBP support (Pryse et al., 2014). Organizational culture, which functions as a bridge between administrative and organizational behaviors, also plays an important role in supporting and guiding EBP processes (Engle et al., 2021). It is defined as the common perspective of working and practice conditions that can be directly influenced by nurse managers, as well as common characteristics such as decision-making, leadership and norms (Pryse et al., 2014). In other words, organizational climate supports nurse empowerment and nurse participation in the decision-making process through management and leadership practices (Allen-Gilliam et al., 2016; Lord et al., 2013). In order to establish an EBP-supportive culture, healthcare organizations need nurses and managers who support and adopt EBP (Cummings et al., 2021). Previous studies have shown that managers should create an EBP work environment, empower frontline nurses with training, enable nurses to participate in decision-making, and provide formal and informal institutional support (Engle et al., 2021; Türe et al., 2020).

Evidence-based nursing attitude
One of the factors influencing practitioners' implementation/use of evidence-based practice is preparation and a positive attitude (Rahmayanti et al., 2020). Studies show that nurses generally have a positive attitude towards the use of evidence-based practice (Adib-Hajbaghery, 2009), although such evidence is rarely reflected in current nursing practices (Adib-Hajbaghery, 2009; Lunden et al., 2019; Wilkinson et al., 2011). While some studies indicate that nurses' knowledge, attitude, and beliefs toward EBP may significantly affect the level of its implementation (AbuRuz et al., 2017; Ammouri et al., 2014; Xie et al., 2017), others state that although nurses have a positive attitude toward EBP, there are lack of implementation of EBP in clinical fields their ability to implement evidence in clinical fields is seriously lacking (Saunders et al., 2019; Zammar et al., 2022).

In 2012, the International Council of Nurses (ICN) devoted the Nursing Day theme to EBP, declaring that nurses assume important roles in moving "from evidence to action" (ICN, 2012). However, nurses should be more aware of their role in improving service quality in order to effectively fulfill these key roles. It is also important that nurses accept these roles in order to gain the necessary knowledge, skills, and attitudes (Oldland et al., 2020). Moreover, health and nurse managers have important responsibilities in developing nurses' awareness, knowledge, and skills (Clavijo-Chamorro et al., 2022; Correa et al., 2020).

Nurses' attitudes toward parental participation and parent-delivered interventions related to FCC/Parental involvement
Parental participation in care and decision-making is essential in the effective implementation of FCC, which is accepted as the gold standard in NICUs (Ramezani et al., 2014). Parents' active involvement in care in the NICU affects not only short-term quality of care but also long-term outcomes such as growth deficits and poor social adaptation of infants. (Cooper et al., 2007; Davidson et al., 2017; Harper et al., 2017; Lasiuk et al., 2013). Neonatal intensive care nurses play a critical role in the implementation of FCC's standards of parental involvement because NICU nurses' positive attitudes towards FCC are a driving force in recognizing the needs of parents/infants and in ensuring the participation of the family in care (Albayrak & Büyükgönenç, 2022; Maree & Downes, 2016; Özbodur Yıldırım, 2008).

FCC adopts a collective approach used in planning, providing, and assessing health services based on the mutual benefits of health professionals, patients, and families. It ensures that the priorities, preferences, and values of patients and families are handled responsively in the provision of health services (Davidson et al., 2017). The literature shows that skin-to-skin care supports optimal outcomes for both infants and parents (Cleveland et al., 2017; Gupta et al., 2021; Pados & Hess, 2020). In addition, skin-to-skin care is an intervention that can be easily implemented and assessed, with minimum cost for hospitals (Florida Perinatal Quality Collaborative, 2021). In addition to skin-to-skin care, encouraging parents to be involved in the care of their infants (feeding, changing diapers, bathing, oral care, massage, etc.) is an important step in the implementation of FCC standards of discharge planning. In this way, parents become independent family care givers who feel competent and confident once the infant is discharged (Florida Perinatal Quality Collaborative, 2021; Franck & O'Brien, 2019).

While great importance has been attached to nurses' positive attitudes towards evidence-based practice, leadership, and work environment in the adoption of FCC, empirical studies revealing the relationship between these factors and nurses' attitudes toward parental involvement and parent-delivered interventions are limited (Franck & O'Brien, 2019). Therefore, this study aimed to: a) examine the effects of nurses' attitudes towards evidence-based practices (EBP) and perceptions of EBP leadership/work environment on attitudes towards parental participation, and (b) determine the effects of such attitudes and perceptions on parental involvement in NICU FCC activities.

Method

Study Design and Setting: This cross-sectional study was conducted with 218 NICU nurses in Turkey between November-December 2020, using an online questionnaire. The study was carried out according to STROBE.

Research Questions:

- Which parent-delivered interventions related to FCC/ in the NICU implement?
- Is there any relationship between the EBPWES and EBPLS, EBNAQ and PPAS scores each other?
- Which independent variables affect NICU nurses' attitudes towards parental participation?
- Which independent variables affect parent-delivered interventions related to FCC/parental involvement in the NICU?

Sampling and Recruitment: Based on the G* Power Software version 3.1.9.2 and relevant reference publications, the sample size was found to be 164 (Ayhan et al., 2015; Türe et al., 2020) with type 1 error 5% and test strength 95%. In this study, because physical interactions were limited due to social distancing measures during the COVID-19 pandemic, an online Qualtrics questionnaire was distributed to NICU nurses using convenience and snowball sampling techniques. Using the snowball technique was to increase nurse participation to study (Østergaard et al., 2020). The questionnaire link was first shared via nurses' WhatsApp and e-mail groups with whom the researchers were in contact. Those who were sent the link were asked to participate in the survey and forward the link to potential participants to the study. All participants had been working as an NICU nurse for at least six months, volunteered to participate in the study, and had online access to the questionnaire link. A total of 279 NICU nurses participated in the study different hospitals in Turkey. Those who did not complete the questionnaire (n=40) or had less than six months of experience (n=21) were excluded, bringing the number of final total participants to 218 NICU nurses.

Instruments: The online questionnaire consisted of six parts: The Nurses Characteristics Form, Parent-delivered interventions related to FCC/parental involvement in the NICU, the Evidence-Based Practice Work Environment Scale (EBPWES), the Evidence-Based Practice Leadership Scale (EBPLS), the Evidence-Based Nursing Attitude Questionnaire (EBNAQ), and the Parent Participation Attitude Scale (PPAS).
The Nurses Characteristics Form: This form included 12 questions concerning nurses' sociodemographic and work-related characteristics, as well as nurses' participation in the specialty training program, scheduling, and perception of workload.
Parent-delivered interventions related to FCC/parental involvement in the NICU: This part of the questionnaire consisted of two questions based on the literature and prepared by the researchers (Franck et al., 2019, Franck & O'Brien, 2019; Ramezani et al., 2014). These questions concerned visiting hours and parent-delivered interventions in infant caregiving in the NICU. These interventions were skin-to-skin contact, feeding, bathing, mouth care, diaper change, and infant massage.
EBPWES: This scale was developed by Pryse, McDaniel, & Schafer (2014) and adapted to Turkish by Türe et al. (2020). The EBPWES examines staff nurses' perceptions of organizational support for EBP, and uses a one-dimensional, eight-item, 5-point Likert-type scale measured as follows: strongly disagree = 1, disagree = 2, neither agree nor disagree = 3, agree = 4, and strongly agree = 5. The scale score is calculated as the mean of the items in the scale. Higher scores indicate higher levels of positive attitudes towards organizational support of EBP (Pryse et al., 2014; Türe et al., 2020). Cronbach's alpha coefficient was found to be α=0.86 for the original scale (Pryse et al., 2014) and α=0.96 for the Turkish EBPWES (Türe et al., 2020). Sample items are: "The nurses on my unit base their practice on the best evidence" and "My organization pays for me to attend educational offerings about EBP".
EBPLS: This scale was developed by Pryse et al. (2014) and adapted to Turkish by Türe et al. (2020). This 5-point Likert-type scale consists of 10 items measured by responses ranging from 1 (strongly disagree) to 5 (strongly agree). The scale score is calculated as the mean of the items in the scale. Higher scores indicate higher levels of nurses' positive attitudes

towards manager nurses' support of EBP. The reliability coefficient of the original scale was found to be α=0.96 (Pryse et al., 2014), and the Cronbach's alpha coefficient of the Turkish version was found to be α=0.97 (Türe et al., 2020). Sample items are: "My manager has a vision for EBP on my unit" and "My manager is able to influence others to engage in EBP."
EBNAQ: This scale was developed by Ruzafa-Martínez et al. (2011), and the Turkish validity and reliability study was performed by Ayhan et al. (2015). The scale consists of 15 questions and three sub-scales. These sub-subscales are: beliefs and expectations towards EBN (items 1, 2, 7, 9, 11, 13, 14), intention of conduct towards EBN (3,5,6,12), and feelings towards EBN (4, 8, 10, 15). The 5-point Likert-type scale includes seven negative and eight positive items. The negative items were reversed while calculating the score. A minimum of 15 and a maximum of 75 points can be obtained from the scale. A higher score indicates a more positive attitude towards EBN. The reliability coefficient was α=0.85 in the original scale (Ruzafa-Martinez et al., 2011) and α=0.90 in the Turkish version (Ayhan et al., 2015). Sample items for each sub-scale are: "The application of EBN improves health care results," "Applying care based on evidence distorts my daily work," and "Practicing EBN is not among my professional priorities," respectively.
PASS: This 5-point Likert-type scale contains 24 items measured by responses ranging from: absolutely disagree = 1, disagree = 2, neutral= 3, agree = 4 points, and absolutely agree = 5. Negative items of the scale (1, 4, 5, 6, 8, 9, 10, 11, 13, 15, 17, 18, 22) were reversed. The lowest score obtained from the scale is 24, and the highest score is 120. Higher scores indicate a more positive attitude towards parental participation in infant care. The Cronbach's alpha coefficient is α=0.74 in the original scale (Gill, 1993) and α=0.67 in the Turkish version (Özbodur Yıldırım, 2008). Sample items are: "The presence of a child's parent is 4 usually very comforting to him/her" and "Most parents are unaware of when it is good for them to be with their child and when it is not."

Data Collection: This study's online survey link (prepared with Qualtrix) was shared via e-mail and/or social media (Whatsapp, Facebook, Instagram, and Linkedin) to find possible participants.
The survey took approximately 10-15 minutes to complete and was sent to the researchers anonymously upon completion. The questionnaire link was active for one month, and 218 nurses completed the questionnaire in its entirety. Participants gave their consent to participate by clicking the "Yes" button after reading a consent statement located at the top of the questionnaire.

Data Analysis: IBM SPSS Statistics for Windows, Version 24.0. (IBM Corp. Armonk, NY: USA. Released 2016), was used in data analysis. Descriptive statistics were used to describe continuous variables (mean, standard deviation, minimum, median, maximum). Frequencies (n) and percentages (%) were used to describe categorical variables. Data distribution was normal, with between +1 and -1 based on Skewwnes and Kurtosis values (Hair et al., 2013). Pearson correlation analysis was used to compare the two continuous variables. In the reliability analysis of the scales, the Cronbach's alpha coefficient was used to evaluate internal consistency. The effect of independent variables on dependent variables was evaluated with two models by multiple regression analysis (backward method). In the first regression model, the dependent variable was nurses' attitudes towards parental participation, and the eight independent variables were: EBPWES score, EBPLS score, EBNAQ score, hospital type, nurses' NICU experience, educational background, possession of NICU certification, and workload perception. In the second regression model, the dependent variable was parent-delivered interventions related to FCC/parental involvement in the NICU, and the nine independent variables were: EBPWES score, EBPLS score, EBNAQ score, PPAS score, hospital type, nurses' NICU experience, educational background, possession of NICU certification, and workload perception. A confidence interval of 95% was set for significance.

Ethical Considerations: Ethical approval for this study was obtained from the ethics committee of a university. Permission was obtained from the authors who adapted the relevant scales to Turkish. The front page of the online survey contained the study's purpose, clarified that the study was anonymous, and required volunteers to confirm consent of participation. Participants were then able to access the questionnaire by clicking the "Yes" button.

Limitations: This study's results are limited to the opinions of nurses who participated in the study. Also, given the cross-sectional nature of our study, causality was not determined.

Results

Sample characteristics
The demographic and professional characteristics of the participants are presented in Table 1.

Table 1. Nurses' demographic and professional characteristics (N:218)

		Mean (SD)	Med. (Min.-Max.)
Duration/years of NICU experience		5.06 (5.08)	3 (0.6-24)
Employment duration/years at current hospital		3.95 (4.55)	2 (0.6-24)
Total professional experience/years		6.18 (6.04)	4 (0.6-28)
		n	%
Gender	Female	210	96.3
	Male	8	3.7
Educational background	High school	50	22.9
	Associate degree	24	11.0
	BSN degree	111	50.9
	MSN degree	33	15.1
Hospitals	Ministry of health hospital	53	24.3
	Private hospital	107	49.1
	University hospital	58	26.6
Job title	Nurse	191	87.6
	Nurse manager	27	12.4
Orientation training for NICU	Yes	147	67.4
	No	71	32.6
NICU certification program	Yes	79	36.2
	No	139	63.8
Scheduling	8 – 10 hours (only daily shift)	61	28.0
	12 hours (daily & night shift)	17	7.8
	8/16 hours or 10/14 hours (daily & night shift)	114	52.3
	24 hours	26	11.9
Perception of workload	Balanced workload	110	50.5
	Heavy workload	108	49.5

NICU: Neonatal intensive care unit, NRP: Neonatal resuscitation program

Most of the participants with 5.06 (SD=5.08) years of NICU experience and 96.3% of them were females. Approximately half (50.9%) of the participants held a BSN degree, and 49.1% were working in a private hospital. Over half (67.4%) of the participants stated that they had received orientation training for the NICU, and 36.2% had completed a neonatal intensive care certification program.

Parent-delivered interventions related to FCC/parental involvement in the NICU
Based on nurses' expressions, infant care parent-delivered interventions and NICU visiting hours are shown in Table 2.

Table 2. Direct care activities of infants related to family-centered care/parental involvement and visiting hours by parents (N:218)

Family-centered care/parental involvement in NICU		n	%
Daily visiting hours by parents	Less than 1 hour	104	47.7
	Between 1-2 hours	66	30.3
	More than 2 hours	48	22.0
Skin-to-skin contact	Yes	191	87.6
	No	27	12.4
Feeding	Yes	212	97.2
	No	6	2.8
Bathing	Yes	81	37.2
	No	137	62.8
Mouth care	Yes	105	48.2
	No	113	51.8
Diaper change	Yes	181	83.0
	No	37	17.0
Infant massage	Yes	92	42.2
	No	126	57.8
		Mean (SD)	Med. (Min.-Max.)
The number of direct care activities of infants related to FCC/parental involvement		3.94±1.55	4 (1-6)

FCC: Family center care, NICU: Neonatal intensive care unit

Approximately half of the nurses (47.7%) stated that parents visited the NICU for less than one hour per day. Nurses reported that among parent-delivered interventions, parents participated in infant feeding, skin-to-skin contact, diaper change, mouth care, infant massage and bathing respectively 97.2%, 87.6%, 83.0%, 48.2%, 42.2% and 37.2%.

Scale descriptive statistics, Cronbach's alpha, and correlation coefficient
Descriptive statistics, internal consistency, and correlation coefficients between scale scores are presented in Table 3.

Table 3. Scale descriptive statistics, Cronbach's alpha, and correlation coefficient

		EBPWES	EBPLS	EBNAQ	PPAS
EBPWES	r	1.000	0.705*	0.001	-0.048
	p		<0.001	0.985	0.479
EBPLS	r		1.000	-0.032	-0.037
	p			0.634	0.584
EBNAQ	r			1.000	0.514*
	p				<0.001
PPAS	r				1.000
Mean (SD)		3.46 (.72)	3.61 (.85)	61.5 (8.1)	84.8 (8.0)
Med. (min-max)		3.5 (1-5)	3.8 (1.1-5)	61.5 (43-75)	85 (64-105)
Cronbach's Alpha		0.75	0.93	0.89	0.69
Spearman Brown Correlation		0.85	0.92	0.89	0.67

*p < .001, r: Spearman rho correlation

EBPWES: Evidence-Based Practice Work Environment Scale, EBPLS: Evidence-Based Practice Leadership Scale, EBNAQ: Evidence-Based Nursing Attitude Questionnaire, PPAS: Parent Participation Attitude Scale

There was a significant correlation between the EBPWES and EBPLS scores (r=0.705, p<0.001), and between the EBNAQ and PPAS scores (r=0.514, p<0.001). There was no relationship between the EBPWES and the EBNAQ scores (r=0.001, p>0.05), between the EBPWES and the PPAS scores (r=-0.048, p>0.05), between the EBPLS and the EBNAQ scores (r=-0.031, p>0.05), and between the EBPLS and the PPAS scores (r=-0.037, p>0.05).

Multiple regression analysis
The results of multiple regression analysis are presented in Table 4 and 5.

Table 4. Independent variables associated with nurses' attitudes toward parental participation

						95% CI	
Variable	**B**	**SE**	**β**	**t**	**p**	**Lower limit**	**Upper limit**
Constant	51.19	3.40		15.237	<.001	44.57	57.81
EBNAQ	0.54	0.06	0.55	9.790	<0.001	0.43	0.64
R=0.36, Adjusted R^2=0.35, F=40.091, p<0.001, Durbin Watson: 2.078							

CI: Confidence Interval, EBNAQ: Evidence-Based Nursing Attitude Questionnaire, SE: Standard error

One of the eight independent variables was found to affect nurses' attitudes towards parental participation. It was observed that a one-point increase in the nurses' attitudes towards EBP resulted in a 0.54 point-increase in attitude towards parental participation (adjusted R^2=0.35, F=40.091, p<0.001, Durbin Watson: 2.078, Table 4).

Table 5. Independent variables associated with the number of direct care activities of infants related to FCC/parental involvement

						95% CI	
Variables	**B**	**SE**	**β**	**t**	**p**	**Lower limit**	**Upper limit**
Constant	1.18	0.55		2.140	0.033*	0.09	.2.26
EBPWES	0.55	0.14	0.26	3.963	<0.001	0.28	0.82
NICU certification	0.50	0.22	0.16	2.222	0.027*	0.06	0.94
R=.12, Adjusted R^2=0.11, F=9.501, p<.001, Durbin Watson: 1.972							

CI: Confidence Interval, EBPWES: Evidence-Based Practice Work Environment Scale, NRP: Neonatal Resuscitation Program, SE: Standard error
*p<0.05

Two of the nine independent variables were found to affect parent-delivered interventions related to FCC/parental involvement in the NICU. These were: EBPWES and completion of NICU certification. It was observed that a one-point increase in the EBPWES resulted in a 0.55 point-increase in the number of NICU parent-delivered interventions, and completion of NICU certification resulted in a 0.50 point-increase in the number of NICU parent-delivered interventions (adjusted R^2=0.11, F=9.501, p<0.001, Durbin Watson: 1.972, Table 5).

Discussion

This study aimed to examine the relationship between EBP leadership, NICU work environment, nurses' attitudes towards EBP and parental participation, and the number of parent-delivered interventions. According to the findings, nurses' attitudes toward parental involvement in care was influenced by their own awareness, while parent-delivered interventions were associated with institutional factors. The results highlight the importance of both institutional and employee dimensions in the implementation of EBP and FCC/parental involvement in the NICU.

In this study, the majority of NICU nurses reported that feeding, skin-to-skin contact, and diaper change in FCC practices were the most frequently involving parents. In addition, approximately half of the NICU nurses stated that parents participated in oral care, infant massage, and bathing practices for caring their babies. Previous studies have shown that skin-to-skin contact and kangaroo care provided optimal outcomes for the infants and their families (Albayrak & Büyükgönenç, 2022; Cleveland et al., 2017; Gupta et al., 2021; Pados & Hess, 2020). Hence, parents who have infants in NICU should be educated and encourage to involve direct care practices for their baby's care (Albayrak & Büyükgönenç, 2022; Florida Perinatal Quality Collaborative, 2021).

In addition, they argue that it should not been visitation restriction in NICU, and parents should be as partners in care, not as visitors (Florida Perinatal Quality Collaborative, 2021; Garfield et al., 2021). In this study, the fact that parental involvement in practices such as skin-to-skin contact and breastfeeding was reported by most nurses can be interpreted as a good practice. However, the fact that fewer nurses reported that other direct care practices such as oral care, infant massage and bathing were performed by parents, and especially that the average length of stay of parents in the NICU was less than one hour may be related to the fact that FCC practices do not commonly implement in Turkey (Albayrak & Büyükgönenç, 2022).

This study showed that nurses' positive attitudes towards EBP also positively affects their attitudes towards parental involvement in neonatal care. This is consistent with previous studies (Koehn & Lehman, 2008; McCleary & Brown, 2002; Squires et al., 2011). A systematic review of nurses' individual determinants of evidence uses by Squires et al. (2011) showed that one of the most important predictors of evidence use is the attitudes and beliefs concerning EBP. Moreover, considering that individual beliefs and attitudes are related to the intention to change behaviors (Godin, et al., 2008), nurses' positive attitudes towards research use can be an important factor that can improve patient care quality.

This study pointed out that while there was positive relationship between EBPLS and EBPWES scores of nurses, their perceptions about EBP leadership and work environment did not effect on nurses' attitudes towards parental involvement in neonatal care and EB nursing. Previous studies showed that the implementation of EBP leadership is a complex process requiring application of evidence and the implementation of multiple, simultaneous strategies involving nursing staff, teamwork, organizational structures, appropriate environment or culture, and transformational leadership practices (Clavijo-Chamorro et al., 2022; Häggman Laitila et al., 2017). This study results can be explaining the EBP leadership work environment and practices are not appropriate to improve nurses' attitudes on EB nursing or nurse managers do not have enough time and skills to implement these practices in NICU. On the other hand, these findings may also indicate that nurses' positive attitudes towards evidence-based practice and family-centered care are related to their own efforts rather than the leadership in their work environment.

This study also showed that an EBP working environment increased the number of parent-delivered interventions related to FCC/parental involvement in the NICU. On the other hand, this study also pointed out that an EBP leadership did not affect the number of parent-delivered interventions related to FCC. Some studies on obstacles to the use of EBP have drawn attention to the lack of institutional support and leadership such as workload, lack of knowledge, inability to participate in decision-making, and access to an environment in which to fulfill roles and duties. (Bahadori et al., 2016; Harper et al., 2017; Koehn & Lehman, 2008; Lunden et al., 2019; Melnyk et al., 2016; Melnyk et al., 2018; Nguyen and Wilson, 2016; Oldland et al., 2020; Wilkinson et al, 2011). In another study, Lunden et al. (2019) reported that nurse managers should assume the responsibility of creating an EBP environment and providing adequate resources in their institutions (Lunden et al., 2019). The results obtained from the current study demonstrate that FCC/parental involvement could be reflected in patient care when nurses are adequately supported in an EBP work environment. In addition, these results also point out that there is a need to improve EBP leadership in NICU for involving parents to care their babies.

Another important result of this study concerned the positive relationship between possession of a NICU certificate and the number of parent-delivered interventions related to FCC in the NICU. Nurse certification in specialized fields has been shown to improve knowledge, attitude, and skills (Melnyk et al., 2018 Göktepe et al., 2020). Adib-Hajbaghery (2009) reported that in order to reinforce EBP, nurses need support from both organizational management and continuing education. In addition, Lunden et al. (2019) stated that continuous EBP training should be provided for both nurses and leaders. The current study's results also show that specialized NICU certification affects parental involvement as an EBP.

Another finding obtained in this study was that there was no relationship between the number of parent-delivered interventions and nurses' positive attitudes towards EBP and towards parental participation. These results are not consistent with those of the study by Lunden et al (2021). Kanninen et al. (2021) emphasized that nurses' participation in the implementation of EBP is important and that staff empowerment is a step in the right direction towards this goal. Lunden et al. (2021) stated that managers should play a more active role in creating an environment suitable for skin-to skin care (kangaroo care) EBP, guiding nurses to practice EBP, and identifying nurses' developmental competence needs. The current study's results show that nurse managers should participate more often in organizational-level decision-making process in order to ensure that staff nurses act in cooperation while putting their awareness and knowledge of EBP into practice.

Conclusion and Recommendations

The previous study showed that parents were been less than one hour in daily and mostly involved to care feeding, skin-to-skin contact, and diaper change in NICU based on nurses' experiences. While there was a positive relationship between NICU nurses' perceptions EBP leadership and EBP working environment, there was no relationship between NICU nurses' perceptions EBP leadership, EBP working environment and attitudes towards EBN and parental participation in their baby care. NICU nurses' higher attitudes to EBP knowledge and awareness positively affected their own attitudes towards parental involvement. This study results also showed that the establishment of an EBP work environment at the organizational level and the provision of neonatal intensive care training for nurses increased parent-delivered interventions.

The study reveals that nurses' awareness of EBP should be reflected in patient care and parent-delivered interventions in the NICU. In order to increase parental involvement in NICUs, it is recommended that nurse managers develop strategies to increase the participation of parents in care in the NICU in order to increase the quality of patient care outcomes and parent satisfaction, improve family-centered care practices and NICU visit and patient information processes, and consider the opinions and suggestions of parents on this issue. In addition, it is recommended that nurse managers should work to improve an EBP work environment in their organizations and focus on reflecting evidence-based practices to patient care processes. Also nurse managers support nurses' participation in institutional and non-institutional trainings and certification programs by regularly analyzing/evaluating the unit-specific training and development needs of nurses. Nurses' awareness of EBP should be reflected in patient care and parent-delivered interventions in the NICU. Further qualitative and quantitative studies on parent-delivered interventions related to FCC in the NICU are recommended.

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References

AbuRuz, M. E., Hayeah, H. A., Al-Dweik, G. & Al-Akash, H. Y. (2017). Knowledge, attitudes, and practice about evidence-based practice: A Jordanian study. *Health Science Journal, 11*(2), 1-8. https://doi.org/10.21767/1791-809X.1000489

Adib-Hajbaghery, M. (2009). Evidence-based practice: Iranian nurses' perceptions. *Worldviews on Evidence-Based Nursing*, *6*(2), 93-101. https://doi.org/10.1111/j.1741-6787.2009.00149.x

Albayrak, S. & Büyükgönenç, L. A. (2022). The impact of family-centered care interventions on neonatal and parental outcomes in a Turkish hospital. *Collegian*. https://doi.org/10.1016/j.colegn.2022.05.004

Allen-Gilliam, J., Kring, D., Graham, R., Freeman, K., Swain, S., Faircloth, G. & Jenkinson, B. (2016). The impact of shared governance over time in a small community hospital. *The Journal of Nursing Administration*, *46*(5), 257-264. https://10.1097/NNA.0000000000000340

Ammouri, A. A., Raddaha, A. A., Dsouza, P., Geethakrishnan, R., Noronha, J. A., Obeidat, A. A. & Shakman, L. (2014). Evidence-based practice: Knowledge, attitudes, practice and perceived barriers among nurses in Oman. *Sultan Qaboos University Medical Journal*, *14*(4), e537.

Austin, B., Downing, C. & Hastings-Tolsma, M. (2019). Experience of neonatal intensive care unit nurses in providing developmentally-supportive care: A qualitative study. *Nursing & Health Sciences*, *21*(3), 336-344. https://doi.org/10.1111/nhs.12603

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. (in Turkish)

Bahadori, M., Raadabadi, M., Ravangard, R. & Mahaki, B. (2016). The barriers to the application of the research findings from the nurses' perspective: A case study in a teaching hospital. *Journal of Education and Health Promotion*, *5*, 1-7. https://10.4103/2277-9531.184553

Bianchi, M., Bagnasco, A., Bressan, V., Barisone, M., Timmins, F., Rossi, S., ... & Sasso, L. (2018). A review of the role of nurse leadership in promoting and sustaining evidence-based practice. *Journal of Nursing Management*, *26*(8), 918-932. https://doi.org/10.1111/jonm.12638

Chan, G., Bergelson, I., Smith, E. R., Skotnes, T. & Wall, S. (2017). Barriers and enablers of kangaroo mother care implementation from a health systems perspective: A systematic review. *Health Policy and Planning*, *32*(10), 1466-1475. https://doi.org/10.1093/heapol/czx098

Cleveland, L., Hill, C. M., Pulse, W. S., DiCioccio, H. C., Field, T. & White-Traut, R. (2017). Systematic review of skin-to-skin care for full-term, healthy newborns. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, *46*(6), 857-869. https://doi.org/10.1016/j.jogn.2017.08.005

Clavijo-Chamorro, M. Z., Romero-Zarallo, G., Gómez-Luque, A., López-Espuela, F., Sanz-Martos, S. & López-Medina, I. M. (2022). Leadership as a Facilitator of Evidence Implementation by Nurse Managers: A Meta synthesis. *Western Journal of Nursing Research*, *44*(6), 567-581. https://doi.org/10.1177/01939459211004905

Cooper, L. G., Gooding, J. S., Gallagher, J., Sternesky, L., Ledsky, R. & Berns, S. D. (2007). Impact of a family-centered care initiative on NICU care, staff and families. *Journal of Perinatology*, *27*(2), 32-37. https://doi.org/10.1038/sj.jp.7211840

Correa, V. C., Lugo-Agudelo, L. H., Aguirre-Acevedo, D. C., Contreras, J. A. P., Borrero, A. M. P., Patiño-Lugo, D. F. & Valencia, D. A. C. (2020). Individual, health system, and contextual barriers and facilitators for the implementation of clinical practice guidelines: A systematic metareview. *Health Research Policy and Systems*, *18*(1), 1-11. https://doi.org/10.1186/s12961-020-00588-8

Cummings, G., Lee, S., Tate, K., Penconek, T., Micaroni, S., Paananen, T. & Chatterjee, G. (2021). The essentials of nursing leadership: A systematic review of factors and educational interventions influencing nursing leadership. *International Journal of Nursing Studies*, 115(4), 1–13. https://doi.org/10.1016/j.ijnurstu.2020.103842

Davidson, J. E., Aslakson, R. A., Long, A. C., Puntillo, K. A., Kross, E. K., Hart, J., ... & Curtis, J. R. (2017). Guidelines for family-centered care in the neonatal, pediatric, and adult ICU. *Critical Care Medicine*, *45*(1), 103-128. https://doi.org/10.1097/CCM.0000000000002169

Duff, J., Cullen, L., Hanrahan, K. & Steelman, V. (2020). Determinants of an evidence-based practice environment: an interpretive description. *Implementation Science Communications, 1*(1), 1-9. https://doi.org/10.1186/s43058-020-00070-0

EFCNI, Bergman, N. J., Westrup, B., Kuhn, P., Daly, M., Bertoncelli, N., Caballero, S. & König, K. (2018). *European Standards of Care for Newborn Health: Very early and continuous skin-to-skin contact*. Retrieved from: https://newborn-health-standards.org/skin-to-skin-contact/ (accessed on February 18, 2021)

Engle, R. L., Mohr, D. C., Holmes, S. K., Seibert, M. N., Afable, M., Leyson, J. & Meterko, M. (2021). Evidence-based practice and patient-centered care: Doing both well. *Health Care Management Review, 46*(3), 174. https://doi.org/10.1097/HMR.0000000000000254

Franck, L. S., Kriz, R. M., Bisgaard, R., Cormier, D. M., Joe, P., Miller, P. S., ... & Sun, Y. (2019). Comparison of family centered care with family integrated care and mobile technology (mFICare) on preterm infant and family outcomes: a multi-site quasi-experimental clinical trial protocol. *BMC Pediatrics*, *19*(1), 1-10. https://doi.org/10.1186/s12887-019-1838-3

Franck, L. S. & O'Brien, K. (2019). The evolution of family-centered care: From supporting parent-delivered interventions to a model of family integrated care. *Birth Defects Research*, *111*(15), 1044-1059. https://doi.org/10.1002/bdr2.1521

Florida Perinatal Quality Collaborative. (2021). Family-Centered Care in the NICU: A Quality Improvement Tool Kit for the PAIRED Initiative https://health.usf.edu/publichealth/chiles/fpqc/paired (accessed on April, 2021)

Garfield, H., Westgate, B., Chaudhary, R., King, M., O'Curry, S. & Archibald, S. J. (2021). Parental and staff experiences of restricted parental presence on a Neonatal Intensive Care Unit during COVID-19. *Acta Paediatrica*, 110(12), 3308-3314. https://doi.org/10.1111/apa.16085

Gill, K. M. (1993). Health professionals' attitudes toward parent participation in hospitalized children's care. *Children's Health Care, 22*(4), 257–271. https://doi.org/10.1207/s15326888chc2204_2

Godin, G., Bélanger-Gravel, A., Eccles, M. & Grimshaw, J. (2008). Healthcare professionals' intentions and behaviours: A systematic review of studies based on social cognitive theories. *Implementation Science*, *3*(1), 1-12. https://doi.org/10.1186/1748-5908-3-36

Göktepe N., Türkmen E., Bozkurt G., Kıraner E., Ergün Y., Ersöz Y., Gül Bozdemir Z. & Kelez Yayık A. (2020). The views of critical care nurses participating in an adult intensive care nursing certification program. *Turkish Journal of Intensive Care, 19, 123-30.* https://doi.org/10.4274/tybd.galenos.2020.58076

Gupta, N., Deierl, A., Hills, E. & Banerjee, J. (2021). Systematic review confirmed the benefits of early skin-to-skin contact but highlighted lack of studies on very and extremely preterm infants. *Acta Paediatrica*, *110*(8), 2310-2315. https://doi.org/10.1111/apa.15913

Häggman-Laitila, A., Mattila, L. R. & Melender, H. L. (2017). A systematic review of the outcomes of educational interventions relevant to nurses with simultaneous strategies for guideline implementation. *Journal of Clinical Nursing*, *26*(3-4), 320-340. https://doi.org/10.1111/jocn.13405

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E. & Tatham, R. L. (2013). *Multivariate data analysis.* New Jersey, USA: Pearson.

Harper, M. G., Gallagher-Ford, L., Warren, J. I., Troseth, M., Sinnott, L. T. & Thomas, B. K. (2017). Evidence-based practice and US healthcare outcomes: Findings from a national survey with nursing professional development practitioners. *Journal for Nurses in Professional Development, 33*(4), 170-179. https://doi.org/10.1097/NND.0000000000000360

International Council of Nurses (ICN). International Nurses Day 2012. Closing the gap: From evidence to action. Retrieved from: https://www.nursingworld.org/~4aff6a/globalassets/practiceandpolicy/innovation--evidence/ind-kit-2012-for-nnas.pdf (accessed on February 18, 2021)

Kanninen, T., Häggman-Laitila, A., Tervo-Heikkinen, T. & Kvist, T. (2021). An integrative review on interventions for strengthening professional governance in nursing. *Journal of Nursing Management*, *29*(6), 1398-1409. https://doi.org/10.1111/jonm.13377

Koehn, M. L. & Lehman, K. (2008). Nurses' perceptions of evidence-based nursing practice. *Journal of Advanced Nursing*, *62*(2), 209-215. https://doi.org/10.1111/j.1365-2648.2007.04589.x

Laibhen-Parkes, N. (2014). Evidence-based practice competence: A concept analysis. *International Journal of Nursing Knowledge*, *25*(3), 173-182. https://doi.org/10.1111/2047-3095.12035

Lasiuk, G. C., Comeau, T. & Newburn-Cook, C. (2013). Unexpected: An interpretive description of parental traumas' associated with preterm birth. *BMC Pregnancy and Childbirth*, *13*(1), 1-10. http://www.biomedcentral.com/1471-2393/13/S1/S13

Leach, M. J. & Tucker, B. (2018). Current understandings of the research-practice gap in nursing: a mixed-methods study. *Collegian*, *25*(2), 171-179. https://doi.org/10.1016/j.colegn.2017.04.008

Longton, S. (2014). Utilizing evidence-based practice for patient safety. *Nephrology Nursing Journal, 41*(4), 343-344.

Lord, L., Jefferson, T., Klass, D., Nowak, M. & Thomas, G. (2013). Leadership in context: Insights from a study of nursing in Western Australia. *Leadership*, *9*(2), 180-200. https://doi.org/10.1177/1742715012468780

Lunden, A., Teräs, M., Kvist, T. & Häggman-Laitila, A. (2019). Nurse leaders' perceptions and experiences of leading evidence: A qualitative enquiry. *Journal of Nursing Management*, *27*(8), 1859-1868. https://doi.org/10.1111/jonm.12886

Lunden, A., Kvist, T., Teräs, M. & Häggman-Laitila, A. (2021). Readiness and leadership in evidence-based practice and knowledge management: A cross-sectional survey of nurses' perceptions. *Nordic Journal of Nursing Research*, *41*(4), 187-196. https://doi.org/10.1177/2057158520980687

Mackey, A. & Bassendowski, S. (2017). The history of evidence-based practice in nursing education and practice. *Journal of Professional Nursing*, *33*(1), 51-55. https://doi.org/10.1016/j.profnurs.2016.05.009

Maree, C. & Downes, F. (2016). Trends in family-centered care in neonatal intensive care. *The Journal of Perinatal & Neonatal Nursing*, *30*(3), 265-269. https://doi.org/10.1097/JPN.0000000000000202

McCleary, L. & Brown, G. T. (2002). Research utilization among pediatric health professionals. *Nursing & Health Sciences*, *4*(4), 163-171. https://doi.org/10.1046/j.1442-2018.2002.00124.x

Melnyk, B. M., Fineout-Overholt, E., Gallagher-Ford, L. & Kaplan, L. (2012). The state of evidence-based practice in US nurses: critical implications for nurse leaders and educators. *The Journal of Nursing Administration*, *42*(9), 410-417. https://doi.org/10.1097/NNA.0b013e3182664e0a

Melnyk, B. M., Gallagher-Ford, L., Thomas, B. K., Troseth, M., Wyngarden, K. & Szalacha, L. (2016). A study of chief nurse executives indicates low prioritization of evidence-based practice and shortcomings in hospital performance metrics across the United States. *Worldviews on Evidence-Based Nursing*, *13*(1), 6-14. https://doi.org/10.1111/wvn.12133

Melnyk, B. M., Gallagher-Ford, L., Zellefrow, C., Tucker, S., Thomas, B., Sinnott, L. T. & Tan, A. (2018). The first US study on nurses' evidence-based practice competencies indicates major deficits that threaten healthcare quality, safety, and patient outcomes. *Worldviews on Evidence-Based Nursing*, *15*(1), 16-25. https://doi.org/10.1111/wvn.12269

Mirlashari, J., Brown, H., Fomani, F. K., de Salaberry, J., Zadeh, T. K. & Khoshkhou, F. (2020). The challenges of implementing family-centered care in NICU from the perspectives of physicians and nurses. *Journal of Pediatric Nursing*, *50*, e91-e98. https://doi.org/10.1016/j.pedn.2019.06.013

Nguyen, T. N. M. & Wilson, A. (2016). Hospital readiness for undertaking evidence-based practice: A survey. *Nursing & Health Sciences*, *18*(4), 465-472. https://doi.org/10.1111/nhs.12293

Oldland, E., Botti, M., Hutchinson, A. M. & Redley, B. (2020). A framework of nurses' responsibilities for quality healthcare-Exploration of content validity. *Collegian*, *27*(2), 150-163. https://doi.org/10.1016/j.colegn.2019.07.007

Özbodur Yıldırım S. (2008). *A validity and reliability study of parent participation attitude scale in Turkey* (Master Thesis). Dokuz Eylül University Health Science Institute, Izmir, Türkiye.

Pados, B. F. & Hess, F. (2020). Systematic review of the effects of skin-to-skin care on short-term physiologic stress outcomes in preterm infants in the neonatal intensive care unit. *Advances in Neonatal Care*, *20*(1), 48-58. https://doi.org/10.1097/ANC.0000000000000596

Pryse, Y., McDaniel, A. & Schafer, J. (2014). Psychometric analysis of two new scales: The evidence-based practice nursing leadership and work environment scales. *Worldviews on Evidence-Based Nursing*, *11*(4), 240-247. https://doi.org/10.1111/wvn.12045

Rahmayanti, E. I., Kadar, K. S. & Saleh, A. (2020). Readiness, barriers and potential strenght of nursing in implementing evidence-based practice. *International Journal of Caring Sciences*, *13*(2), 1203-1211.

Østergaard, B., Clausen, A. M., Agerskov, H., Brødsgaard, A., Dieperink, K. B., Funderskov, K. F., … & Konradsen, H. (2020). Nurses' attitudes regarding the importance of families in nursing care: A cross-sectional study. *Journal of Clinical Nursing, 29*(7-8), 1290–1301. https://doi.org/10.1111/jocn.15196

Ramezani, T., Shirazi, Z. H., Sarvestani, R. S. & Moattari, M. (2014). Family-centered care in neonatal intensive care unit: A concept analysis. *International Journal of Community Based Nursing and Midwifery*, *2*(4), 268.

Ruzafa-Martínez, M., López-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), 664-670. https://doi.org/10.1111/j.1365-2753.2011.01677.x

Saunders, H. & Vehviläinen-Julkunen, K. (2017). Nurses' evidence-based practice beliefs and the role of evidence-based practice mentors at university hospitals in Finland. *Worldviews on Evidence-Based Nursing*, *14*(1), 35-45. https://doi.org/10.1111/wvn.12189

Saunders, H., Gallagher-Ford, L., Kvist, T. & Vehviläinen-Julkunen, K. (2019). Practicing healthcare professionals' evidence-based practice competencies: An overview of systematic reviews. *Worldviews on Evidence-Based Nursing*, *16*(3), 176-185. https://doi.org/10.1111/wvn.12363

Saunders, A. F., Wakeman, S., Cerrato, B. & Johnson, H. (2021). Professional development with ongoing coaching: A model for improving educators' implementation of evidence-based practices. *TEACHING Exceptional Children*, 00400599211049821. https://doi.org/10.1177/00400599211049821

Schaefer, J. D. & Welton, J. M. (2018). Evidence based practice readiness: A concept analysis. *Journal of Nursing Management*, *26*(6), 621-629. https://doi.org/10.1111/jonm.12599

Squires, J. E., Estabrooks, C. A., Gustavsson, P. & Wallin, L. (2011). Individual determinants of research utilization by nurses: A systematic review update. *Implementation Science*, *6*(1), 1-20. https://doi.org/10.1186/1748-5908-6-1

Türe, A., Demirsoy, N. & Yıldırım, A. (2020). Validity and reliability of Evidence-Based Practice Leadership Scale and Evidence-Based Work Environment Scale in Turkish. *Perspectives in Psychiatric Care*, *56*(4), 968-978. https://doi.org/10.1111/ppc.12529

Välimäki, T., Partanen, P. & Häggman-Laitila, A. (2018). An integrative review of interventions for enhancing leadership in the implementation of evidence-based nursing. *Worldviews on Evidence-Based Nursing*, *15*(6), 424-431. https://doi.org/10.1111/wvn.12331

Xie, H.T., Zhou, Z.Y., Xu, C., Ong, S. & Govindasamy, A. (2017) Nurses' Attitudes towards research and evidence-based practice: Perspectives from psychiatric setting. *JOJ Nurse Health Care, 3,* 555624. https://doi.org/10.19080/JOJNHC.2017.03.555624

White, K. M. (2019). Evidence-based practice. In: K. M. White, S. Dudley-Brown & M. F. Terhaar (Eds.). *Translation of evidence into nursing and healthcare* (3rd ed. pp. 77-149). Springer Publishing Company. https://doi.org/ 10.1891/9780826147370

World Health Organization (WHO). (2017). *Facilitating evidence-based practice in nursing and midwifery in the WHO European Region* (No. WHO/EURO: 2017-5314-45078-64291). World Health Organization. Regional Office for Europe. Retrieved from https://www.euro.who.int/__data/assets/pdf_file/0017/348020/WH06_EBP_report_complete.pdf (accessed on February 19, 2021).

Wilkinson, J. E., Nutley, S. M. & Davies, H. T. (2011). An exploration of the roles of nurse managers in evidence-based practice implementation. *Worldviews on Evidence-Based Nursing*, *8*(4), 236-246. https://doi.org/10.1111/j.1741-6787.2011.00225.x

Zammar, A. M. A. (2022). Nurses' knowledge and attitude regarding evidence-based practice: An integrative review. *Open Journal of Nursing*, *12*(2), 103-112. https://doi.org/10.4236/ojn.2022.122007