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Breastfeeding Knowledge and Behaviors of Postpartum Mothers

Doğum Sonu Dönemdeki Annelerin Emzirmeye İlişkin Bilgileri ve Emzirme Davranışları

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Abstract

Objective: The purpose of the study is to reveal the breastfeeding knowledge and behaviors of postpartum mothers.

Material-Method: This descriptive study was conducted in the largest hospital where the highest number of delivery in a Mediterranean country, with 290 mothers. The data were collected with questionnaire and the LATCH Breastfeeding Charting System. The data collection form was administered face-to-face interviews by the researchers to mothers. The breastfeeding behaviors of mothers were evaluated twice.

Results: The mean breastfeeding knowledge score was 27.88±3.30, the mean LATCH score was 7.75±1.95, and 30.7% of mothers did not need support for breastfeeding. One-third of the participants (35.8%) who had a below-average breastfeeding knowledge score got 10 from LATCH, 26.1% of those who had an above-average score. Although mothers who had cesarean, who were getting adequate breastfeeding information during pregnancy, and who lacked social insurance had high breastfeeding knowledge scores, appropriate breastfeeding behaviors were exhibited at a higher level by mothers who had a lower educational status, who did not work, who had already had two or more deliveries or had two or more living children, who had experienced breastfeeding before, and who had a vaginal delivery ($p<0.05$).

Conclusions: In order to improve the incidence and duration of breastfeeding, it is essential that "baby-friendly hospital initiative", should be reflected in national policies and implemented at all hospital. Since breastfeeding is influenced by a number of factors, any personalized training/counseling service should be based on a decent recognition of a given culture.

Keywords: Breastfeeding, Knowledge, Behavior, Postpartum Period.

Özet

Amaç: Bu çalışmanın amacı annelerin doğum sonrası dönemde emzirmeye ilişkin bilgilerini ve davranışlarını belirlemektir.

Materyal-Metot: Tanımlayıcı tipteki araştırma, bir Akdeniz ülkesinde en yüksek doğum oranına sahip en büyük hastanede, 290 anne ile yürütülmüştür. Veriler araştırmacılar tarafından hazırlanan Veri Toplama Formu ve LATCH Emzirme Tanılama Ölçeği aracılığı ile toplanmıştır. Veri toplama formu, araştırmacı tarafından, yüz yüze görüşme yöntemi ile uygulanmıştır. Annelerin emzirme davranışları iki kez gözlemlenerek puanlanmıştır.

Bulgular: Annelerin emzirme bilgi puan ortalamalarının 27,88±3,30, LATCH Emzirme Tanılama Ölçeği puan ortalamalarının 7,75±1,95 olduğu ve %30,7'sinin emzirme konusunda desteğe ihtiyaç duymadıkları belirlenmiştir. Emzirme bilgi puan ortalaması, ortalamanın altında olan annelerin %35,8'i, emzirme bilgi puan ortalaması, ortalamanın üstünde olan annelerin %26,1'i LATCH ölçeğinden 10 puan almışlardır ($p=0,050$). Sezaryen doğum yapan, emzirme ile ilgili gebeliğinde aldığı bilgiyi yeterli bulan ve sosyal güvencesi olmayan annelerin emzirme bilgi puanlarının yüksek olmasına rağmen, ilkokul ve altı eğitim durumuna sahip, çalışmayan, iki ve üzeri gebelik geçiren ya da yaşayan çocuğu olan, daha önce emzirme deneyimi yaşayan ve normal doğum yapan anneler daha yüksek oranda doğru emzirme davranışı göstermişlerdir ($p<0,05$).

Sonuç: "Bebek Dostu Hastane" kavramının ülke politikalarına yansıtılması ve doğum yaptırılan tüm hastanelerde uygulanması emzirme sıklığı ve süresinin iyileştirilmesi açısından önemlidir. Emzirme davranışının birçok faktörden etkilenmesi nedeniyle, bireye özgü geliştirilecek eğitim ve danışmanlık hizmetlerinde, hizmetin yürütüldüğü toplumunun kültürünün iyi tanınması gereklidir.

Anahtar kelimeler: Emzirme, Bilgi, Davranış, Doğum Sonu Dönem.

Introduction

The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) recommend that infants be exclusively breastfed for the first six months, and receive a combination of supplementary food and breast milk until age two (1). It has been reported that infants in developing countries who are not breastfed are at greater risk of death relative to infants who are exclusively breastfed in the first three or four months of life (2).

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Despite the countless documented benefits of breastfeeding to both mother and infant, the percentage of mothers who exclusively breastfeed their infants for the first six months has not yet reached the desired level in many parts of the world. In 2011, the worldwide rate of exclusive breastfeeding for the first six months was found to be 36% (3). The Turkey Demographic and Health Study (TDHS) reported in 2013 that 96.4% of infants were breastfed during the postpartum period, but only 9.4% of infants younger than six months were exclusively breastfed (4). While there are no data on breastfeeding behaviors in the country the study conducted where, it is thought that the current status of breastfeeding is not desired level because of the lack of breastfeeding-related legal regulations and the standard provision of formula in clinics soon after delivery.

Evidence suggests many factors contribute to the initiation and maintenance of breastfeeding (5-7). One of the primary reasons mothers experience difficulty with breastfeeding is the lack of sufficient knowledge of and preparation for breastfeeding (8-10). Further, successful breastfeeding practice depends upon the maintenance of physical and mental health; a balanced diet; adequate breast care; and thorough breastfeeding training, both during and after pregnancy. However, the prevalence and quality of antenatal care services in the country where the study conducted suggest that breastfeeding behavior is not sufficiently supported; therefore, postpartum clinics represent a site wherein women can potentially receive breastfeeding assistance. In postpartum clinics, women should be informed of the recommendation to breastfeed their infants within thirty minutes after birth, and instruction regarding breastfeeding positions and techniques should be provided. These practices should facilitate the development of appropriate breastfeeding behavior (11).

There are no maternity hospitals in the country where the study conducted, and the obstetrics clinics of state-run hospitals do not meet the criteria for a “baby-friendly hospital initiative”. Further, formula feeding is rather common. This suggests conditions that are detrimental to successful breastfeeding practice; however, breastfeeding knowledge and behaviors of women in the country where the study conducted have not yet been examined. Thus, the purpose of the present study was to explore breastfeeding knowledge and behaviors in postpartum women in the country the study conducted where. The results of this study might serve as guidelines for planning breastfeeding services in the country where the study conducted; emphasize the importance of breastfeeding training departments and the training of healthcare professionals, particularly midwives and nurses; enhance the quality of breastfeeding services and training; and positively influence breastfeeding knowledge and behaviors in mothers.

Material and Methods

This cross-sectional study was conducted in a hospital which is the highest annual number of births. Participants were mothers hospitalized in the gynecology and obstetrics clinic. A total of 290 participants satisfied the criteria for study inclusion. Since this study could have affected breastfeeding behavior, women who had an infant weighing less than 2500 grams and preterm delivery, an infant who was referred to the pediatrics department for health reasons, or infants diagnosed with a systemic disorder were excluded from the study.

The study was conducted in the largest state-run hospital in a Mediterranean country. The gynecology and obstetrics clinic within this hospital has the greatest inpatient bed availability of any such clinic in the country. The clinic serves postpartum mothers and infants, as well as at-risk pregnant women and women with gynecological disorders. The hospital’s policy stipulates that mothers who have a caesarean delivery be discharged three days after the operation, while women who have a vaginal delivery may remain in the hospital for one or two days. Even though antenatal services are provided at the hospital, breastfeeding training is not included. During the postpartum period, nurses monitor mothers’ vital signs, check for potential bleeding, administer treatments, and provide maternal and infant care. The clinic lacks a nurse that specializes in newborn care and breastfeeding. If required, midwives and nurses working in the postpartum unit will help mothers with breastfeeding problems, such as the when an infant has difficulty latching on to the breast. The hospital allows for advertisements and promotions for formulas. Formula is offered to new mothers, especially mothers who are experiencing breastfeeding difficulties.

Data were collected via questionnaire and the LATCH Breastfeeding Chartering System (12). The questionnaire was developed by the authors using the literature (1, 5-7, 9, 11). Expert opinion was obtained from an expert group consisted of nurses working in obstetrics clinics, academics researching breastfeeding and maternal health, and one in-service training nurse. The questionnaire contained items pertaining to the socio-demographics, pregnancy and delivery conditions, and breastfeeding experiences of the mother. Also there were 43 statements regarding breastfeeding knowledge that participants indicated as either true or false. Each correct response was assigned 1 point; therefore, the maximum score was 43. Breastfeeding behaviors, were assessed using the LATCH Breastfeeding Charting System. The scale is focused on five specific criteria for evaluating breastfeeding and taking action when necessary. The criteria are as follows: Latch on Breast, Audible Swallowing, Type of Nipple, Comfort of Breast/Nipple, and Hold/Positioning (LATCH). The breastfeeding skill of the mother was assessed using these five criteria, rated according to researchers’ observations of the mother breastfeeding her infant. Two such observations were conducted for each participant and the total score was the mean of these two ratings. Each criterion for the LATCH was assigned 0, 1, or 2 points, and breastfeeding behavior was assessed in reference to the total score (12). The highest possible score on the scale was 10. Since a score lower than 10 indicated that breastfeeding support was needed, participants were divided into two groups: those who received a score of 10 and those who received a score of 9 or below. The questionnaire was piloted with 29 mothers and found to be acceptable; pilot data were not included in the final analysis.

Researchers administered the questionnaire to participants

through face-to-face interviews. Interviews were conducted after participants had received their first postpartum care, were transferred from the delivery room or operating room to the service room, and indicated a readiness to proceed. The first breastfeeding behavior of the participants were observed they were admitted into the clinic. Breastfeeding behaviors were assessed in reference to the LATCH scoring system. The participants were observed and rated once more before they were discharged from the hospital.

The data were analyzed using SPSS 17.0 (SPSS; SPSS Inc., Chicago, USA). Descriptive statistics (number, percentage, mean, standard deviation) were used to describe the characteristics of the mothers. Pearson chi-square test was used to analyze the differences between the mothers who had LATCH scores below nine and who had 10 according to breastfeeding knowledge points. Pearson chi-square test also was used to analyze the difference between LATCH scores and breastfeeding knowledge points according to selected independent variables. P values <0.05 were accepted as statistically significant.

Written consent was obtained from the Inpatient Treatment Institutions, a department of the country where the study conducted (2010/2412). This study was conducted in accordance with Declaration of Helsinki. Written informed consent was obtained from all participants prior to data collection.

Results

Participant Characteristics

The mean age of the participants was 27.15 ± 5.83, and 47.9% of them had graduated from a high school or had some form of higher educational experience. Nearly four out of five mothers (81.4%) had social insurance, but 59.7% did not have a job. The majority (77.9%) of the participants was members of a nuclear family, and 59% of them had more than two children. Slightly more than half the participants (53.8%) delivered their current infant vaginally. Finally, 47.9% of participants had received breastfeeding information for their current delivery, but 63.3% of the women had found the information inadequate (Table 1).

Breastfeeding Knowledge and LATCH Scores of Mothers

The mean breastfeeding knowledge score was 27.88 ± 3.30 (Table 2). The statements that were most frequently answered correctly were “breast milk protects the infant from certain diseases” (98.6%), “breast milk is enriched if the mother consumes a sufficient amount of liquids and maintains a balanced diet” (97.2%), and “exclusively breastfeeding the infant for the first six months promotes his/her healthy growth and development” (95.5%). Conversely, the mean LATCH score was 7.75±1.95, and only 30.7% of the participants received a score of 10 (Table 2).

Slightly over one-third of participants (35.8%) with a below-average breastfeeding knowledge score and 26.1% of participants with an above-average breastfeeding knowledge score received a 10 on the LATCH Breastfeeding Charting System (p=0.05) (Table 3).

Table 1. Descriptive characteristics of the mothers

Age (year)*	**n (%)**
≤19	29 (10.0)
20–29	163 (56.2)
≥30	98 (33.8)
Education	
Primary school	101 (34.9)
Secondary school	50 (17.2)
High school or above	139 (47.9)
Working status	
Non-worker	173 (59.7)
Worker	117 (40.3)
Social insurance	
Yes	236 (81.4)
No	54 (18.6)
Family type	
Extended family	64 (22.1)
Nuclear family	226 (77.9)
Number of pregnancies	
1	101 (34.8)
2 or more	189 (65.2)
Number of living children	
1	119 (41.0)
2 or more	171 (59.0)
Prior breastfeeding experience (n=171)**	
Yes	143 (83.6)
No	28 (16.4)
Received breastfeeding information during pregnancy	
Yes	139 (47.9)
No	151 (52.1)
Opinion on adequacy of information received (n=139)***	
Adequate	51 (36.7)
Inadequate	88 (63.3)
Type of delivery	
Vaginal	156 (53.8)
Caesarean section	134 (46.2)

* X±SD=27.15±5.83
** The question was only answered by the mothers with living child/children.
*** The question was only answered by the mothers who had been informed about breastfeeding during their pregnancy.

Table 2. Distribution of mothers by breastfeeding knowledge points and LATCH scores

Knowledge Points	**n (%)**	**mean±SD**
19–24	37 (12.8)	
25–30	196 (67.5)	27.88±3.30
31–36	57 (19.7)	
LATCH Scores		
≤9	201 (69.3)	7.75±1.95
10	89 (30.7)	

Table 3. Distribution of mean LATCH scores by mean breastfeeding knowledge scores

Breastfeeding Knowledge Points	LATCH Scores		p value
	≤9 n (%)	10 n (%)	
$\bar{X}\downarrow$	88 (64.2)	49 (35.8)	
$\bar{X}\uparrow$	113 (73.9)	40 (26.1)	p=0.05

Although 58.1% of the working mothers and 49.1% of the non-working mothers had an above-average breastfeeding knowledge score, 37% of the latter and 21.4% of the former scored a 10 on the LATCH (p<0.05). Additionally, 51.5% of the mothers who were primary school graduates or had a lower educational status demonstrated above-average breastfeeding knowledge, and 43.6% of them scored a 10 on the LATCH (p<0.05). Results also showed that 75.9% of mothers who did not have any social insurance had an above-average breastfeeding knowledge score, and 33.3% of these participants scored a 10 on the LATCH (p<0.05) (Table 4).

Significant relationship between breastfeeding knowledge score and number of pregnancies or living children were not observed (p>0.05); however, participants who had two or more pregnancies or two or more children were more likely to score a 10 on the LATCH (p<0.05). While 60.7%

Table 4. Differences in descriptive characteristics by breastfeeding knowledge points and LATCH scores

	Knowledge Points		LATCH Scores	
	$\bar{X}\downarrow$ n (%)	$\bar{X}\uparrow$ n (%)	≤9 n (%)	10 n (%)
Education				
Primary school	49 (48.5)	52 (51.5)	57 (56.4)	44 (43.6)
Secondary school	29 (58.0)	21 (42.0)	41 (82.0)	9 (18.0)
High school or above	59 (42.4)	80 (57.6)	103 (74.1)	36 (25.9)
p values	0.16		**0.01**	
Working status				
Non-worker	88 (50.9)	85 (49.1)	109 (63.0)	64 (37.0)
Worker	49 (41.9)	68 (58.1)	92 (78.6)	25 (21.4)
p values	0.08		**0.03**	
Social insurance				
Yes	13 (24.1)	41 (75.9)	36 (66.7)	18 (33.3)
No	124 (52.5)	112 (47.5)	165 (69.9)	71 (30.1)
p values	**0.00**		0.37	
Number of pregnancies				
1	47 (46.5)	54 (53.5)	79 (78.2)	22 (21.8)
2 or more	90 (47.6)	99(52.4)	122 (64.6)	67 (35.4)
p values	0.47		**0.01**	
Number of living children				
1	53 (44.5)	66 (55.5)	91 (76.5)	28 (23.5)
2 or more	84 (49.1)	87 (50.9)	110 (64.3)	61 (35.7)
p values				
Previous breastfeeding experience (n=171)				
Yes	68 (47.6)	75 (52.4)	85 (59.4)	58 (40.6)
No	11 (39.3)	17 (60.7)	25 (89.3)	3 (10.7)
p values	0.27		**0.00**	
Received breastfeeding information during pregnancy				
Yes	60 (43.2)	79 (56.8)	102 (73.4)	37 (26.6)
No	77 (51.0)	74 (49.0)	99 (65.6)	52 (34.4)
p values	**0.01**		0.43	
Type of Delivery				
Vaginal	97 (62.2)	59 (37.8)	97 (62.2)	59 (37.8)
Caesarean section	40 (29.9)	94 (70.1)	104 (77.6)	30 (22.4)
p values	**0.00**		**0.00**	

of participants who had not breastfed their previous child/children and 52.4% of those who had breastfed their previous child/children demonstrated above-average breastfeeding knowledge, 40.6% of the latter group and 10.7% of the former group scored a 10 on the LATCH: the difference in LATCH score between the former and latter group was significant ($p<0.05$). A significant relationship among type of delivery, breastfeeding knowledge, and LATCH score was observed ($p<0.05$), with participants who delivered vaginally scoring higher on both assessments (Table 4).

While mothers who were provided with breastfeeding information during their current pregnancy had higher breastfeeding knowledge scores, the correlation between receiving information, breastfeeding knowledge score, and LATCH score was negligible ($p>0.05$). However, mothers who were content with the type of breastfeeding information they received had higher breastfeeding knowledge scores ($p<0.05$) (Table 4).

Discussion

In the present study, only one-third of participants did not require breastfeeding support. This finding is consistent with other studies that reported low mean breastfeeding behavior scores (12, 13). It can be argued that unsatisfactory breastfeeding behavior scores in mothers may have resulted from ineffective and discontinuous information during pregnancy, and unsatisfactory support in postpartum clinics. Since mothers discharged from the hospital with inadequate breastfeeding behaviors will not be able to successfully breastfeed at home, it is essential that home support be provided to mothers to promote the health of their infants.

The results of the present study additionally show that mothers with below-average breastfeeding knowledge scores were more likely to score a 10 on the LATCH (Table 3). Breastfeeding success depends on a number of other factors in addition to breastfeeding knowledge (14). Thus, these factors should be taken into consideration, and personalized breastfeeding support programs should be developed.

Some studies have reported that training programs are the single most important factor in breastfeeding, and that breastfeeding training and support provided by healthcare professionals will increase the duration and incidence of breastfeeding among women (15,16). In particular, antenatal training provided by healthcare professionals is expected to positively influence the degree of breastfeeding success (11, 17). The present study found that almost half of participants received breastfeeding information during their current pregnancy (Table 1). This finding indicates that breastfeeding training is not a particularly emphasized part of antenatal care services in the country the study conducted where. While women who received breastfeeding information during pregnancy should theoretically obtain significantly greater breastfeeding knowledge and LATCH scores, this was not observed in the present study; rather, receiving breastfeeding information during pregnancy did not influence breastfeeding behavior (Table 4). This result likely reflects the ineffective and insufficient nature of the information provided, or the inability to translate the information into action. In light of these findings, it is recommended that nurses consider all factors that may contribute to breastfeeding success, especially when planning antenatal breastfeeding training. Further, results suggest that mothers should be supported both at hospital and at home after delivery so that they may practice what they have learned.

Studies on the duration and incidence of breastfeeding indicate that the higher a mother's education level is, the better she understands the benefits of breast milk; therefore, educated mothers exhibit more positive breastfeeding behaviors and breastfeed for a longer period (18, 19). Similarly, the present study showed that mothers who were high school graduates or had experienced higher education attained greater breastfeeding knowledge scores (Table 4). The finding is consistent with Ekambaram et al. (2010), who found that mothers' breastfeeding scores increase with their educational status (20). Mothers with greater breastfeeding knowledge are expected to possess superior breastfeeding skills; however, the present study found that the mothers who were primary school graduates or had lower educational levels were more likely to score a 10 on the LATCH. This may have been observed because a country where the study conducted is still characterized by traditionalism, and mothers with a lower educational status tend to have more children and consequently greater experience with breastfeeding.

The present results showed that having multiple pregnancies and multiple children was correlated with a LATCH score of 10 (Table 4). It is known that primiparous mothers begin postpartum breastfeeding later, are less inclined to exclusively breastfeed their infants, and suffer from more frequent nipple problems (21-23). Thus, additional support should be provided to first-time mothers both during pregnancy and after delivery. The present study found that those mothers who had previously breastfed received higher LATCH scores (Table 4). Thus, mothers with positive breastfeeding experiences should continue to be supported, while mothers with negative past experiences should receive additional support both at hospital and at home during pregnancy and the postpartum period.

Although the mothers who had a cesarean delivery achieved higher breastfeeding knowledge scores, mothers who delivered vaginally were more likely to score a 10 on the LATCH (Table 4). Previous studies suggest that mothers who have a cesarean delivery are capable of breastfeeding, but tend to experience more breastfeeding problems than do women who deliver vaginally (24, 25). These problems likely result from the delay in breastfeeding caused by recovery from anesthesia and the pain associated with major abdominal surgery. Therefore, nurses working in postpartum clinics should more closely observe mothers who have had a cesarean delivery and provide them with additional breastfeeding support.

Conclusion

In this study, it was determined that approximately half of the mothers had lower breastfeeding knowledge scores than the average and two of every three mothers need support for breastfeeding. This results show that the breastfeeding

knowledge and behaviors of mothers in the country where the study conducted, are not satisfactory. It is especially important in developing countries like this country that the "baby-friendly hospital initiative" is reflected in national policies, and that hospital management is accordingly informed. This approach should ideally be adopted at maternity hospitals as well as all health care institutions where children are born. In this way, developing countries could implement a program that can be maintained in both the hospital and home during the antenatal and postpartum periods. In addition, since breastfeeding is influenced by a number of factors, personalized training or counseling services should be done. Finally, if women who are likely to experience breastfeeding challenges can be identified early, measures can be taken to ensure these women receive additional support so that they may successfully breastfeed for an adequate period of time.

Limitations

Our research has some limitations that should be mentioned. Some variables such as having information about breastfeeding during pregnancy, the content of information and the adequacy of information given to women were based on the participants' self reports in this cross sectional study. In addition, this research was conducted at one hospital and study duration was limited to 4 months. Therefore, the sample size was small. Thus, the research results cannot be generalized to entire whole population.

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