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Research Article

How mothers feed their 0-12-month-old children in Turkey's Eastern province of Van?

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Abstract

Objective: This research was planned to evaluate how mothers with 0-12-month-old infants who had been admitted to health centers in the city center of Van. **Methods:** The data of this descriptive research were collected by face-to-face interviews with 635 mothers. The data were evaluated by chi-square and logistic regression analysis. **Results:** The mean duration of exclusive breastfeeding of infants was 4 months. While 47.9% of 1-6-month-old infants were still being breastfed, 53.5% of 7-12-month-old infants were being fed with proper nutrition in addition to breast milk. It was confirmed that infants of 6 months or younger are four times better fed than babies of 7 months and older, infants breastfed in the first postnatal hour are fed 1.6 times better than those breastfed after the first hour, and that infants not given pacifiers are two times better fed compared to those that are not given these aids. **Conclusion:** In the present study, the frequency of exclusive breastfeeding was higher than that indicated average of Turkey. Additionally, a negative relationship was found between using pacifiers and proper nutrition. Our study showed that the aims that WHO and of the United Nations Children's Fund (UNICEF) suggest could not be reached but results were still found to be better compared to those of TNSA-2008 and TNSA-2013.

Keywords: Exclusively breastfed, infant, education, proper nutrition

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Van ilinde 0-12 aylık bebeği olan anneler bebeklerini nasıl besliyorlar?

Özet

Amaç: Bu çalışmanın amacı, Van ilinde bulunan yedi sağlık ocağı bölgesinde yaşayan annelerin, 0-12 aylık bebeklerini nasıl beslediklerini değerlendirmektir. **Yöntem:** Bu tanımlayıcı araştırmanın verileri yüz yüze görüşme tekniği ile 635 anneden elde edilmiştir. Veriler Ki-Kare ve Lojistik Regresyon Analizleri ile değerlendirilmiştir. **Bulgular:** Bebeklerin sadece anne sütü ile beslenme süresi ortalaması dört aydır. 1-6 aylık bebeklerin, %47.9'u sadece anne sütü ile beslenirken, 7-12 aylık bebeklerin %53.5'i anne sütü ile birlikte ek gıdalar da alıyordu. Bebeklerin 6 ay ve altında olanları, 7 ay ve üstü olanlara göre 4 kat, ilk 1 saatte emzirilenler 1 saatten sonra emzirenlere göre 1.6 kat, emzik kullanmayanlar kullananlara göre 2 kat daha doğru beslenmektedir. **Sonuç:** İlk altı ayda yalnız anne sütü alımının ülkemiz ortalamalarının üstünde olduğu, ilk bir saate anne sütü verilmesi ve emzik kullanılmamasının anne sütü ile beslenme oranlarını artırdığı saptanmıştır. Çalışmamızın sonuçları değerlendirildiğinde; DSÖ ve UNICEF'in, ilk 6 ay sadece anne sütü, sonraki aylarda iki yıl boyunca anne sütü ve ek gıdalarla beslenme konusundaki hedefe ulaşılamadığı ama yine de 2008 ve 2013 TNSA verilerinden daha iyi olduğu görülmüştür.

Anahtar kelimeler: Yalnız anne sütü ile beslenme, bebek, eğitim, ek gıda ile beslenme

Introduction

Breastfeeding is the most suitable and unique method of nutrition for an infant's healthy growth and it also has a very special biological and emotional effect on mother and infant health.[1] The reports of the World Health Organization (WHO) point out that infectious diseases such as diarrhea, pneumonia and bronchitis are some of the major diseases causing infant deaths and that one of the simplest ways of preventing infection is feeding infants with breast milk.[2-3] WHO and the United Nations Children's Fund (UNICEF) suggest that newborn infants should be fed breast milk in the first six months of life, supported with necessary complementary foods in the sixth month, and that breastfeeding should be continued for two years.[4,5]

Since the 1990s, WHO and UNICEF have drawn attention to breastfeeding through programs such as "Baby-Friendly Hospitals" and "Ten Steps Successful Breastfeeding." The Turkish Ministry of Health has kept up a program for the "Promotion of Breastfeeding and Baby-Friendly Hospitals" since 1991, in accordance with the advice of WHO and UNICEF, in order to maintain and support the practice of feeding infants with breast milk in Turkey.[6-7] The programs are built on the principles of offering infants breast milk in the first one hour after birth, then feeding infants exclusively breast milk without any complementary food in the first six months, and providing appropriate proper nutrition in addition to breast milk after six months.[4,8-11]

Researchers have shown that providing mothers, families, and especially fathers with constant breastfeeding education, offering infants complementary foods beginning from the seventh month, and providing social support when needed are important in promoting breastfeeding.[12-18]

Primary health centers are of major importance in supporting the practice of breastfeeding and have been carrying out this program since 2001. The importance of breastfeeding education at health centers to which women in rural areas often apply for training and health services cannot be denied. An evaluation of the data of the Turkish Demographic and Health Survey (TDHS) shows that infant-related health indexes is worse in rural areas of Turkey.

But, general improvements of infant-related indexes have been seen over the years in Turkey.[19,20,21]

This research was planned to evaluate how mothers with 0-12-month-old infants who had been admitted to health centers in the city center of Van.

Methods

This research was a descriptive type of survey. The data were collected through face-to-face interviews with a questionnaire containing 45 questions posed to 635 mothers applying to 7 health centers in the city center of Van for the examination and vaccination of their healthy infants aged 0-12 months between the periods September 1and October 31, 2011. Each day almost 20 mothers were coming to a health center, and we decided to interview each of them. Mothers were chosen who had accepted to do interview at the health center. These 7 health centers were pilot centers for Medical Faculty, and intern medical students take training for two months there. The verbal consent of the participants was collected before the survey. The study was approved by the Ethics Committee of Van University on 15.08.2011, with decree no. 19.

The questionnaire was drawn up by benefiting from another questionnaire that had been used in a study entitled, "Assessing Mandated Breastfeeding Education in İstanbul" carried out by Dolgun and Yüksel in the period 2007-2008.[22] This questionnaire consisted of 45 questions that included sociodemographic variables related to mothers and their babies, the status of their participation in breastfeeding education before or after birth, delivery type, and where the birth had taken place. It also included for the postnatal period the first initiated time of breastfeeding, as well as several questions about the feeding of the infants follows: the majorities were open-ended questions. The dependent variables were adopted as "early fed"(breastfeeding status in the first one hour) and "proper nutrition" (exclusive breastfeeding in the first six months, feeding with complementary foods in addition to breast milk after six months). The editing of the data and the statistical analysis were performed using the Statistical Package for Social Sciences (SPSS.13.00) program. Bivariate associations were examined using the chi-square test. Binary stepwise forward logistic regression was used for binary outcomes.

Results

Descriptive results

The mean age of mothers participating in the research was 27.72±5.82 (min= 15, max=46). Of the mothers, 97.5% (620) were housewives and 50.3% were illiterate. The mean number of persons living in the household was 7.32±3.21 (min=2, max=26, median=7). The mean number of children for each mother was 3.47±2.08 (median=3). Of the mothers, 86.6% (550) delivered vaginally at their last births and 78.8% in the hospital. A group of 29.6% of the mothers (n=188) stated that they had received breastfeeding education before or after the birth. The mean birthweight of infants was 2982.42±588.31gr. (median=3000) (n=396) and birth length was 49.64±2.69 cm. (median=50.0) (n=189). Of the infants, 50.2% were girls.

According to the mothers reports, 83.9% of the infants (n=533) had no difficulty with being breastfed. The mean duration of breastfeeding without any additional food was 4.08±1.83 (median=4) months. The mean month of weaning was at 5.86±3.24 (median=6) months. The mean starting month in which mothers gave their infants complementary foods was 5.82±0.08 (median=6) months. Of the infants, 30.2% (n=193) were using a pacifier.

While 74.9% (n=239) of the 1-6-month-old infants (n=319) were still breastfeeding, 53.5% (n=169) of the 7-12-month-olds (n=316) were being fed with complementary foods in addition to breast milk. 1.9% of mothers (n=12) never breastfed their infants, 8.5% (n=54) had stopped breastfeeding in the 12 months. How mothers who participated in the study still fed their infants is shown in Table 1.

Table 1. Distribution by months of infant nutrition status

Infant's month of age	Exclusive breastfeeding		Breast milk and other foods diet								Weaned, other foods diet		Total	
			Water and/or tea		Ready formula		Comple-mentary food		Formula comple-mentary food					
n	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
1	49	92.5	1	1.9	1	1.9	0	0	0	0	2	3.7	53	100.0
2	44	91.7	2	4.2	1	2.1	0	0	0	0	1	2.0	48	100.0
3	40	74.1	6	11.1	3	5.6	1	1.9	2	3.7	2	3.6	54	100.0
4	50	74.6	9	13.4	7	10.5	1	1.5	0	0	0	0	67	100.0
5	33	67.4	4	8.2	3	6.1	3	6.1	5	10.2	1	2.0	49	100.0
6	23	47.9	3	6.3	12	25.0	4	8.3	5	10.4	1	2.1	48	100.0
7	3	4.9	2	3.3	16	26.2	22	36.1	15	24.6	3	4.9	61	100.0
8	0	0	2	2.9	5	7.2	40	58.0	13	18.9	9	13.0	69	100.0
9	0	0	0	0	1	1.9	31	58.5	14	26.4	7	13.2	53	100.0
10	0	0	1	2.3	0	0	20	46.5	12	27.9	10	23.3	43	100.0
11	0	0	0	0	0	0	32	66.7	8	16.7	8	16.6	48	100.0
12	1	2.4	0	0	0	0	24	57.1	7	16.7	10	23.8	42	100.0
Total	243	38.3	30	4.7	49	7.7	178	28.0	81	12.8	54	8.5	635	100.0

Breastfeeding the infant in the first 1 hour after birth: Early Fed

Of all the mothers 71.8% early fed their infants. Another 71.3% (n=319) indicated that they had not received breastfeeding education and 73.4% of the mothers receiving education (n=188) had early fed their infants. There was no statistically significant difference between mothers receiving and not receiving breastfeeding education before and after the birth in terms of early feeding their infants.

However, in comparing the breastfeeding status in the first hour after birth of 188 mothers who had received breastfeeding education in terms of whether they were educated by a doctor or a midwife, it was found that all of the mothers who had received the education from a doctor and 67.1% of those who received the education from a midwife/nurse had begun to breastfeed in the first hour after the birth (Table 2).

Table 2. Early fed and related factors

	Early fed						
	Yes		No		Total		
	n	%	n	%	n	%	p
Breastfeeding Education							
Did not received	319	71.3	128	28.7	447	100.0	0.32
Received	138	73.4	50	26.6	188	100.0	
Breastfeeding education from							
Physician	35	100.0	0	0	35	100.0	**0.000**
Midwife/Nurse	105	68.6	48	31.4	153	100.0	
Mother's age							
15-19	26	68.4	12	31.6	38	100.0	0.37
20 and over	431	72.1	166	27.9	597	100.0	
Mother's Education Level							
Illiterate	244	75.9	77	24.1	321	100.0	**0.02**
Literate	214	67.7	100	32.3	314	100.0	
Delivery Place							
Hospital	363	72.7	137	27.3	500	100.0	0.23
Home	93	68.9	42	31.1	135	100.0	
Delivery mode							
Normal Vaginal	422	76.8	128	23.2	550	100.0	**0.000**
Cesarean	34	40.0	51	60.0	85	100.0	
Post-Natal Life Threatening Events							
No	440	73.4	160	26.6	600	100.0	**0.001**
Yes	16	45.7	19	54.3	35	100.0	
Birth Order							
1-3	254	72.0	99	28.0	353	100.0	0.46
4 and over	202	71.6	80	28.4	282	100.0	

According to the mothers' reports, those starting to breastfeed in the first hour were 45.7% among the mothers who experienced life threatening events (difficult birth, meconium aspiration, umbilical cord entanglement etc.) during and after the birth, the percentage was 73.4% for those who had not experienced such a risk. The difference between the groups was found to be statistically significant ($p<0.001$). The frequency of breastfeeding in the first hour (76.8%) for mothers who had a normal birth is higher than that of mothers who delivered by cesarean section (40.5%). The difference between the two groups is statistically significant ($p<0.001$) (Table 2).

Logistic regression analysis was performed to determine the factors affecting the infant's breastfeeding in the first one hour. It was determined that among the mothers

who had delivered vaginally breastfed their babies early 4.48 times (95% CI: 2.75-7.39) more than mothers who delivered by cesarean section and mothers who had not experienced life-threatening situations breastfed their babies 2.31 times (95% CI: 1.09-4.90) more than who had not such event (Table 3).

Proper nutrition

The frequency of proper nutrition in 0-6-month-old infants (75.2%) was found to be higher (40.8%) than in infants of 7-12 months. In terms of proper nutrition, a statistically significant difference was found between infants in the first 6 months and those older than 6 months (p<0.001).

Table 3. Logistic regression analysis of factors affecting early fed of infant

	p	OR (95% CI)
Post-natal life threatening events		
No	**0.02**	2.31 (1.09-4.90)
Mother's education level		
Illiterate	0.05	1.44 (0.99-2.08)
Delivery mode		
Normal vaginal	**<0.001**	4.48 (2.75-7.39)

The frequency of proper nutrition for children in the third or higher birth orders (54.0%) was lower than that (64.4%) for the first and the second child (p<0.006).

When the proper nutrition status of infants was examined in terms of their mothers' level of education, it was seen that there was a statistically significant difference between groups (p<0.04).

The frequency of proper nutrition in infants of mothers who received breastfeeding education was not higher compared to that of infants whose mothers had not received the education. As a result, a statistically significant difference was not found between the two groups (p>0.05). However, in comparing the proper nutrition status of 188 mothers who had received breastfeeding education in terms of whether they were educated by a doctor or a midwife, it was found that most of the mothers who had received the education from a doctor and of those who received the education from a midwife/nurse had right proper nutrition (p<0.001). A statistically significant relationship was found between the status of infants not using pacifiers and proper nutrition (p<0.001).

There was a statistically significant relationship between being early fed and proper nutrition (p<0.008).

The frequency of mothers' having difficulties has 46.1% (n=47) during breastfeeding and 60.3% (n=322) has not any difficulties during breastfeeding. A statistically significant relationship was found compared to that having difficulties breastfeeding.

A statistically significant relationship was found between the status of mothers having a human milk problem (36.0%, n=31) and not having this problem (64.0%, n=56) in terms of proper nutrition (p<0.001) (Table 4).

A stepwise forward logistic regression analysis showed that factors that influenced proper nutrition in infants included: an infant's age as either 1-6 or 7-12 months: using a pacifier; whether or not the mother had difficulties breastfeeding, and whether she had received breastfeeding education. According to the analysis proper nutrition was 8.15 (95% CI: 3.46-19.18) times more in infants of 6 months or younger as than in infants of 7 months or older, 4.14 (95% CI: 1.83-11.19) times more in infants who were not using pacifiers as opposed to those that did, 4.94 (95% CI: 1.51-16.09) times more likely where the mother has no difficulties breastfeeding and10.66 (95% CI: 2.03-55.84) times more likely if the mother had had breastfeeding education from a physician (Table 5).

Discussion

Throughout all of the past breastfeeding has taken a major place in infant nutrition in both traditional and modern societies.

Table 4. Proper nutritional status of infants according to some mother and infant characteristics

	Proper Nutrition						
	Right		Not Right		Total		
Variables	**n**	**%**	**n**	**%**	**n**	**%**	**p**
Mother's Education Level							
Illiterate	174	54.5	145	45.5	319	100.0	**0.04**
Literate	195	61.7	121	38.3	316	100.0	
Mother's age							
15-19	20	52.6	18	47.4	38	100.0	0.5
20 and over	349	58.5	248	41.5	597	100.0	
Infant's month of age							
1-6 months	240	75.2	79	24.8	319	100.0	**<0.001**
7-12 months	129	40.8	187	59.2	316	100.0	
Use of pacifier							
Did not use	289	65.4	153	34.6	442	100.0	**<0.001**
Used	80	41.1	113	58.9	193	100.0	
Receiving Breastfeeding Education							
Received	123	65.4	65	34.6	188	100.0	0.089
Did not receive	246	55.0	201	45.0	447	100.0	
Breastfeeding Education From							
Physician	33	94.3	2	5.7	35	100.0	**<0.001**
Midwife/ Nurse	90	58.8	63	41.2	153	100.0	
Birth order							
1-2	161	64.4	89	35.6	250	100.0	**0.006**
3 and over	208	54.0	177	46.0	385	100.0	
Delivery Mode							
Vaginal	318	57.8	232	42.2	550	100.0	0.39
Cesarean	51	60	34	40	85	100.0	
Early Fed							
Yes	279	61.2	177	38.8	456	100.0	**0.008**
No	90	50.3	89	49.7	179	100.0	
Difficulties Breastfeeding							
No	322	60.3	211	39.7	533	100.0	**0.005**
Yes	47	46.1	55	53.9	102	100.0	
Human Milk Problem							
No	337	61.5	211	38.5	548	100.0	**<0.001**
Yes	31	36.0	56	64.0	87	100.0	

Table 5. Logistic regression analysis of factors influenced proper nutrition in infants

Variables	p	OR (95% CI)
Mother's education *Literate*	0.68	0.82 (0.33-2.05)
Infant's month of age *1-6 months*	**<0.001**	8.15 (3.46-19.18)
Use of pacifier *No*	**0.001**	4.14 (1.83-11.19)
Birth order *1-2*	0.75	2.33 (0.97-5.94)
Early fed	0.36	1.55 (0.62-4.01)
Human milk problem *No*	0.51	1.44 (0.48-4.34)
Difficulties breastfeeding *No*	**0.008**	4.94 (1.51-16.09)
Breastfeeding education *Physician*	**0.005**	10.66 (2.03-55.84)

The importance of breastfeeding has been emphasized in studies carried out on the growth and development of infants and on the prevention of many infectious diseases.[23-24] Traditions and beliefs and insufficient education have caused the initiation of breastfeeding to be delayed in some regions.[9,25] In spite of this, most mothers are breastfeeding their infants.

Breastfeeding gained more importance in both rural and urban areas of Turkey after the recommendations of WHO and UNICEF regarding feeding infants breast milk exclusively for six months.[3] Because in primary health centers a new program of supporting mothers for breastfeeding, such as breastfeeding room for mothers.

Because the health centers in which the present research took place were in the regions of Van that attracted for migrants the socio-economic and educational levels of the majority of the people applied to these health centers, were low. While 97.6% of the mothers were housewives, 50.3% of the study group were illiterate. According to TDHS 2008 and 2013, 58.2%-25.8% of women in Middle Eastern Anatolia (the region in which Van is located) are not even graduates of an elementary school.[20-21]

Breastfeeding in the first one hour after birth-Early Fed

After the physiological process of delivery, physical and psychological contact is maintained between mother and infant by breastfeeding in the first one hour. It is known that early lactation is useful not only for the mother but also for the infant since the first breast milk, known as colostrum, is rich in antibodies which protect the newborn against infections.

According to TDHS 2008 and 2013, data on the start of breastfeeding of newborns shows that initiation of feeding with breast milk is significantly delayed in Turkey. It has been reported that among mothers throughout Turkey, for 61% in west Anatolia and 39% in the region of Eastern Anatolia breastfeeding was early fed.[20,21] In this study, however, 71.8% of the mothers early fed. This finding represented a higher percentage as compared to TDHS 2008 and 2013, but at the same time was found to be consistent with similar studies conducted in Turkey.[10,20,22,23,26] The high frequency of early fed infants may have resulted from the fact that the majority of the mothers (86.6%) had experienced normal vaginal births. According to TDHS 2013, cesarean births are 48%.[21] It was found that breastfeeding after cesarean births does not occur as soon as it does after vaginal births, a finding that is also consistent with other publications.[8,23,26,27]

When the status of early fed breastfeeding was examined in the 188 women in the present study in terms of whether the mothers received breastfeeding education from doctors or from midwives/nurses, it was found that mothers who had received the education from doctors had a higher frequency of breastfeeding in the first hour compared to those who had been educated by midwives/nurses. The reason for this may

be that women had had their last delivery in a hospital and it is known that doctors working at these hospitals would place importance on breastfeeding education. The women followed the doctor's advice more than that of midwifes. Breastfeeding education must continue after birth, especially in the first year. Breastfeeding must be supported by midwives and nurses. As a matter of fact, at the majority of the hospitals in Van, where the study was conducted, have assumed the title of "baby-friendly" health centers and other hospitals in the system are in the process of adopting the same system. According to TDHS 2013, early fed is reported for 50% giving birth under the care of medical staff and 40% for illiterate mothers, 54% in lycea graduated mothers, 41% in low income mothers and 54% in mothers with a moderate income.[21] It was has been shown that the factors positively influencing early fed breastfeeding are: giving birth in a hospital, normal birth, not experiencing any life-threatening risk for the infant after birth, and being illiterate. Similarly, in the study conducted by Çetin et al., it was reported that a higher frequency of breastfeeding in the early fed was seen in the case of mothers with lower levels of education.[8] The reason for this may be that lesser educated women are more likely to follow the advice of health professionals, particularly their physicians, or otherwise because early lactation is a part of traditional lifestyles.

In a study conducted in Singapore by Su et al on the effects of antenatal education and postnatal support on breastfeeding, it is reported that education and social support provided particularly in the postnatal period are of great importance.[28] In this study as well, it was suggested that the underlying reason for the positive effect of giving birth in the hospital has on breastfeeding in the first hour.

Proper Nutrition

WHO and UNICEF recommend that infants be fed exclusively with mother's milk for six months as from birth, that they are given solid and soft complementary foods starting from the seventh month and that this program of complementary foods plus mother's milk be continued until the child is two years old.[4,5] In this study, infants fed according to this pattern for their age in months were considered to be properly nurtured. However, a limitation of this research was that the content of complementary foods was not adequately described.

When infant nutrition was evaluated in this study according to infant age in months, it was seen that the frequency of breastfeeding declined to 47.9% at six months while it was 92.5% in the first month and 91.7% in the second month. According to the results of TDHS-2008, 69% of infants are exclusively breastfed in the first two months of their lives but the percentage of exclusive breastfeeding drops to 16% in the sixth and seventh month.[20] In the study of Dolgun and Yüksel, while the ratio of breastfeeding was 81.1% for infants in the first month and 68.3% in the second month, breastfeeding declined to 19.8% in the sixth month.[22] In the present study, while the frequency of exclusive breastfeeding was higher than that indicated in TDHS-2008 and in Dolgun and Yüksel, the frequency of exclusive breastfeeding was at a higher level but the decrease in breastfeeding as the infant grew is similar. In the study of Ünalan et al., mothers' beliefs in the inadequacy of breast milk led to their thinking that the time had come for proper nutrition and the factors contributing to this tendency were cited as: an infant's premature birth, using pacifiers, the use of baby bottles before the age of six months, and giving the newborn formula food at the hospital.[29]

According to TDHS-2008, 62.2% of 6-7-month-olds are fed water, fruit juice, milk, solid foods, etc. in addition to breast milk.[20] In the present study, 72.4% of 6-7-month infants were fed proper nutrition in addition to breast milk. TDHS 2008-2013 studied in the field, but this study was in primary health center and due to that there are differences.

Of the mothers in the study, 91.5% were still breastfeeding at the time of the study. The socio-economic and cultural structure

of the region where the study was carried out supports a lengthy period of breastfeeding. In the study of Kondolot et al on "Factors Affecting Exclusive Breastfeeding", 91.7% of infants, and 88.4% of infants in the study by Yıldız et al were being breastfed.[10,30] In the three-month follow-up study that Arlotti et al. carried out in Florida on low-income groups that were or were not receiving breastfeeding education from the public health center, it was reported that the groups receiving education were exclusively breastfeeding at a higher frequency compared to the other group and that exclusive breastfeeding ratios were related to the duration of the breastfeeding period.[31]

In the study by Ünsal et al., it was reported that the percentage of breastfeeding was significantly higher in mothers with a single child compared to those with more than one child.[27] In this study, too, it was found that first and second children are more properly nurtured than infants of other birth orders and that the difference between groups is statistically significant. It can be said that mothers are more careful and sensitive about breastfeeding their first two children.

The average month of starting to offer infants complementary foods in the present study was 5.8±0.08 (median=6) months. This is close to what has been suggested by WHO and UNICEF.[4-5]

Ünsal et al. found that the percentage of pacifier and bottle usage was 63% and the percentage of exclusive breastfeeding was low.[26] In our study, 30.3% of infants were using a pacifier. A statistically significant relationship was found between the use of pacifiers and proper nutrition. Using pacifiers and baby bottles reduced the percentage of breastfeeding; the high percentage in our study may be explained by the low percentage of pacifier and bottle usage. Early fed and proper nutrition are very important for infants to be healthy for the rest of life.

We have found that, if a mother does not have human milk problem or difficulties breastfeeding then proper nutrition resulted.

The limitations of the study addressed are; mothers could not speak Turkish very well, they were a little afraid to answer questions and time was short. Also, another limitation is that there was no question about their prenatal care in a primary health center or other centers.

Conclusion and suggestions

An evaluation of the data obtained in our study showed that the aim of exclusively breastfeeding for six months, with the later addition to breast milk of proper nutrition and breastfeeding until the age of two years could not be reached but results were still found to be better compared to the those of TDHS-2008 and 2013.[20,21] The traditional acceptance of breastfeeding in rural areas, the health centers' success in their work with women may have been contributing factors to these results. Furthermore, the availability and economic aspect of breast milk might be important reasons underlying the preference for breastfeeding in regions such as reported in this study, where socioeconomic conditions are poor.

Because breastfeeding frequency in the first one hour is higher in mothers giving normal birth, if in future years, both doctors and mothers start to prefer normal delivery except in the event of necessity, instead of adding to the rise of cesarean births as they have been in recent years, such a new trend will be supportive of breastfeeding.

In this study, a negative relationship was found between using pacifiers and proper nutrition, which was consistent with the literature. The negative effects on breastfeeding of pacifiers and baby bottles should be explained to the people at every turn.

It was seen that there has been considerable success in informing mothers about the necessity of breastfeeding in the first one hour but mothers were still not informed enough about the necessity of continuing their breastfeeding for two years while offering their infants proper nutrition after the sixth month. A positive result of encouraging mothers to give birth in the hospital is the opportunity that arises in this

way to educate mothers and their families about the importance and techniques of breastfeeding. While almost all health centers in Van have become baby-friendly hospitals, it is important to ensure that opportunities for education are not missed. At the same time, antenatal care must include breastfeeding education, which is advised by WHO and Health Ministry in Turkey.

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