

ORIGINAL RESEARCH

Medicine Science 2019;8(3):516-9

Milk expression and maternity leave as determinants of breastfeeding among mothers employed in a baby friendly hospital

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Received 19 November 2018; Accepted 11 January 2019

Available online 18.02.2019 with doi:10.5455/medscience.2018.07.8989

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Abstract

This study aimed to evaluate breastfeeding behaviors among healthcare professional mothers employed in a hospital which support Baby Friendly Hospital (BFH) Initiative program. Methods: This cross-sectional and descriptive study was performed in Erciyes University Hospital between August 2011 and June 2012. 175 healthcare professional mothers who had 1-5 years old children recruited for the study. Data was collected via a questionnaire which contains 51 questions. The rate of exclusive breastfeeding (EB) was 33.1% among healthcare professional mothers employed in a BFH. The mean of total breastfeeding duration was 13.02 ± 7.53 months. The rates of cesarean delivery and initiation breastfeeding in an hour were 77.7% and 61.7% respectively of the study group. Vaginal delivered mothers' breastfeeding rates in first one hour (79.5%) were significantly higher than caesarean delivered mothers' (56.6%) ($p < 0.05$). Professions and expressing breastmilk were found to be effective variables for EB ($p < 0.05$). Unpaid maternity leave was found significant for long-term breastfeeding. Expressing breastmilk and performing legal arrangements for prolonging maternity leave seems like important factors for encouraging breastfeeding.

Keywords: Breastfeeding, healthcare, lactation, mother

Introduction

World Health Organization (WHO) and United Nations International Children's Emergency Fund (UNICEF) recommends exclusive breastfeeding (EB) for the first six months and to continue up to two years or beyond [1]. Although many benefits of breastfeeding are well known for both mother and baby many women cannot achieve this metric in worldwide.

Breastfeeding is common in Turkey as in whole world [2]. The medians for EB and total breastfeeding durations were found as 1.2 months and 16.7 months respectively in Turkey's Demographic and Health Survey (TDHS) 2013 [2]. Thereby, it seems difficult to achieve the target set by WHO and UNICEF for infants' EB for the first six months.

To obtain the maximum beneficial effects of breast milk, it is necessary to prolong the breastfeeding duration [3]. Previous studies report returning to work affects negatively breastfeeding [4-6]. Also, it is reported that short maternity leave leads to increase in early cessation of breastfeeding [7]. Women planning to return to work after delivery are less likely to begin [4] or continue breastfeeding [6].

Maternity leave defined as the number of weeks postnatal when women were off work legally [8]. International Labor Organization recommends employed women should have a minimum paid maternity leave of 14 weeks [8, 9]. The increasing numbers of women in the global workforce draw attention to the provision of maternity leave [9]. Laws concerning maternity and breastfeeding leave are still improving in Turkey based on providing babies breastfed as WHO recommendations. In 2003 only Turkey increased the length of maternity leave from 12 to 16 weeks among the Eastern European and Central Asian countries [10]. Turkish labor law allows a pregnant woman 16 weeks of maternity leave;

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with eight weeks taken prenatal and eight weeks taken postnatal periods. Besides, mothers can use unpaid maternity leave up to 24 months after delivery. Breastfeeding breaks during the workday can total three hours per day during the first six months after delivery, and one and half hours from six months to one year [11].

The Baby Friendly Hospital (BFH) Initiative program launched by WHO and UNICEF in 1991 to establish breastfeeding [12, 13]. Healthcare professional (HP) mothers have an advantage due to employ in a BFH but also have a disadvantage due to being employed women. Due to this reason the aim of this cross-sectional and descriptive study is to evaluate breastfeeding behaviors among HP mothers employed in a BFH.

Material and Methods

Study design

This cross-sectional and descriptive study was performed in Erciyes University Hospital between August 2011 and June 2012. There were 217 HP mothers who had 1-5 years old children were included in the study, but 26 of them refused to recruit. Six of them were still on maternity leave and eight of them were on unpaid maternity leave. Also, one HP mother had twins, and one HP mother's baby had cleft palate and could not have breastfed. Therefore, 175 HP mothers completed the study.

Data collection

Data was collected via a questionnaire which contains 51 questions about mother's sociodemographic characteristics, baby's birth, breastfeeding features. The researchers visited participants at the clinics and filled the questionnaire using face to face method.

Ethical consideration

This study was approved by the Erciyes University Faculty of Medicine's Ethics Committee (Ref No. 2011/277; 2011 May 03).

Statistical analyses

Statistical analysis was performed using the SPSS 22.0 package program. Descriptive analysis was presented using frequencies (n), percentages (%), mean ($\bar{x}$), and standard deviation ($\pm$ SD) values. Breastfeeding for ≤ 6 and ≤ 12 months is accepted as dependent variables. The relations between dependent variables with the independent variables (mother's sociodemographic characteristics, unpaid maternal leave, breastmilk expressing) is evaluated by logistic regression analysis.

Results

The mean age of the HP mothers was 32.4 ± 3.7 years (min-max 22-42 years) and the mean age of the children was 32.6 ± 15.1 months (min-max 12-60 months). Some characteristics of HP mothers were presented in Table 1.

According to our results caesarean rate (77.7%) was very high among HP mothers. Moreover, vaginal delivered mothers' breastfeeding rates (79.5%) in first one hour were significantly higher than caesarean delivered mothers' breastfeeding rates (56.6%) ($p < 0.05$). Most of the HP mothers (67.4%) stated that their breastmilk had decreased when they started to work after delivery, while 18.9% stated no change in amount of their breastmilk and 13.7% stated that they stopped breastfeeding (data now shown in a table).

Table 1. Some characteristics of the HP mothers

Characteristics	n	%
Age		
≤ 30 years	58	33.1
31-35 years	82	46.9
≤ 36 years	35	20.0
Education level		
Associate degree	43	24.6
Graduate degree	115	65.7
Master degree	13	7.4
Doctorate degree	4	2.3
Professions		
Group 1 (Doctor, Nurse, Midwife)	129	73.7
Group 2 (Psychologist, Physical therapist, Nutritionist)	13	7.4
Group 3 (Health technician)	33	18.9
Mode of delivery		
Vaginal	39	22.3
Caesarean	136	77.7
Total	175	100.0

Table 2. Breastfeeding behaviors of HP mothers

Breastfeeding behaviors	n	%
Breastfeeding status (n=175)		
Breastfed for a time	150	85.7
Still breastfeeding	25	14.3
First breastfed time after birth (n=175)		
In the first one hour	108	61.7
After the first one hour	67	38.3
EB duration (n=175)		
≤ 6 months	117	66.9
6 months	58	33.1
Total breastfeeding duration (n=150)*		
<6 months	34	22.7
6-11 months	42	28.0
12-17 months	28	18.7
18-23 months	29	19.3
≥ 24 months	17	11.3

*150 mothers terminated breastfeeding, 25 mothers were still breastfeeding.

Half of the HP mothers (50.3%) used unpaid maternity leave. Rate of taking unpaid maternity leave among Group 1 (58.9%) was significantly higher ($p < 0.05$). Most of HP mothers (74.9%) preferred to take their annual leave and to transfer their prenatal maternity leaves after delivery for prolonging their baby-caring time (data now shown in a table).

Also, we found that the rate of expressing breastmilk was lower among the HP mothers who took unpaid maternal leave (31.8%) than the others (79.3%). Expressing breastmilk rate of Group 3 (72.7%) was higher than Group 1 (49.6%) and Group 2 (69.2%) (Data now shown in a table).

According to logistic regression analysis, professions and expressing breastmilk were found to be effective variables for EB ($p < 0.05$).

Table 3. Comparison of HP mothers' some characteristics, breastfeeding ≤ 6 and ≤ 12 months

Characteristics	n	Breastfeeding ≤ 6 months OR (95% CI)	Breastfeeding ≤ 12 months OR (95% CI)
Age	≤ 30 years	1	1
	31-35 years	1.854 (0.914- 3.760)	1.074 (0.435- 2.650)
	≤ 36 years	1.838 (0.750- 4.507)	1.361 (0.583- 3.182)
Education level	Associate degree	1	1
	Graduate degree	1.129 (0.539- 2.365)	0.744 (0.223- 2.477)
	Postgraduate degree	0.982 (0.303- 3.183)	0.875 (0.295- 2.600)
Professions	Group 1	1	1
	Group 2	0.643 (0.198- 2.096)	0.872 (0.371- 2.051)
	Group 3	0.427 (0.195- 0.934) *	0.321 (0.069- 1.491)
First breastfed time after birth	In the first one hour	1	1
	After the first one hour	1.601 (0.822- 3.119)	1.195 (0.621- 2.298)
Expressing breastmilk	Yes	1	1
	No	2.339 (1.204- 4.544) *	0.727 (0.380- 1.389)
Unpaid maternity leave	Yes	1	1
		0.721 (0.383- 1.356)	2.382 (1.234-4.597) *

Discussion

We evaluated breastfeeding behaviors of HP mothers who were employed in a BFH. In order to induce the baby's sucking reflex and lactation in the postpartum period, the baby should be breastfed within one hour [14]. The rate of mothers started breastfeeding within first hour was 61.7% in the current study and it was higher than reported in TDHS 2013 (49.9%) [2]. This was not surprising because HP mothers could have more knowledge about the advantages of early breastfeeding than others. Vaginal delivered mothers' breastfeeding rates (79.5%) in an hour were significantly higher than caesarean delivered mothers' (56.6%) in the current study. Cesarean delivery was also reported as a significant barrier that inhibits breastfeeding within the first hour at previous studies [15-17]. It takes time for a mother to get rid of anesthetic if she was delivered by cesarean section and therefore the first breastfeeding time of her baby is delayed.

Only one third of HP mothers performed EB at the study. The Global Breastfeeding Scorecard [18] which evaluated 194 nations' data found that only 41.0% of babies were breastfed exclusively. HP mother's rate of EB was close to the rates reported in TDHS (30.1%) [2], and study from Ethiopia reported from nurses and midwives (35.9%) [19] and it is also clearly high compared with the 11.1% reported from doctors in Nigeria [20]. This difference can be explained by cultural differences.

Median duration of breastfeeding was reported as 16.7 months according to TDHS 2013 [2]. Although study group was conscious about breastfeeding the fact that employed mothers seems to be the reason for this low rate. In many studies, employing was also reported to have negative influence on duration of breastfeeding [21,22]. Moreover, factors such as being employed full-time [23] and early return to work after childbirth [24,25] increased the likelihood of early breastfeeding cessation.

We expected mothers to have longer breastfeeding duration because participants were HP in BFH, but in accordance with the literature, like the other employed mothers they had shorter breastfeeding duration time.

At this study mother's age was not associated with EB feeding and total breastfeeding duration. Contrast to this result, mother's age was defined as one of the factors affecting breastfeeding duration in literature; older women were more likely to breastfed their babies for a longer period [26]. This difference can be explained by high mean age of the mothers recruited in the study.

Our study showed no relation with mother's education level and EB and total breastfeeding duration. Data collected from Bangladesh demonstrated maternal education level significantly correlates of EB [27]. But another study showed breastfeeding rate was lower among high educated [28]. We obtained a conflicting result because our study sample consist nearly same-educated healthcare professionals.

There were no significance professions and breastfeeding ≤ 12 months. In the literature, we have not found any other study comparing HP's breastfeeding behaviors with each other's. EB rate was higher among the 3rd group may be because of the differences at employed conditions.

We found that the mothers who were expressing breastmilk had higher rates of EB. The only chance for an employed mother to feed her baby only by breastmilk in the first six months is expressing breastmilk. To our knowledge there was no study about expressing breastmilk and EB.

After six months of babies' additional foods are started and can be used during the hours when the mother is not with the baby. We also have not found a relationship between breastfeeding and expressing breastmilk for ≥ 12 months.

In our study there was no significance between being on unpaid maternity leave and EB. As we reviewed literature we recognized there were limited studies. Most of the employed mothers tend to extend their prenatal leave by adding their annual leave and by passing some of their prenatal leave after birth in Turkey. In addition, three hours of breastfeeding permission per day in the first six months also allows mothers to continue breastfeeding. Thus, mothers can spend most of the six months on leave even

they do not get unpaid maternity leave. When we look at long-term breastfeeding; mother's, getting unpaid maternity leave were more likely to breastfeed for ≥ 12 months similar to literature. Many studies reported that prolonging maternity leave for women affects breastfeeding positively [26,29,30].

Limitations

We did not make any evaluations to reveal the level of knowledge of the mothers about breastfeeding. We assumed that they were knowledgeable about the subject because they were health care professionals and employed in a baby-friendly hospital. The study was carried out only in only hospital and the results could not be generalized to all healthcare professional mothers.

Conclusion

Breastmilk expressing is important for maintaining EB. Half of the mothers expressed breastmilk and most of them expressed it at work. Employed situations are very important for expressing breastmilk. Mothers should be allowed to express their breastmilk in workplaces and physical arrangements should be made to express and storage the expressed breastmilk. Mothers' unpaid leave is effective in long-term breastfeeding their babies. All mothers have no chance of getting unpaid leave mostly because of economic reasons. Postpartum paid leave periods or daily breastfeeding leave periods may be extended.

Competing interests

The authors declare that they have no competing interest.

Financial Disclosure

All authors declare no financial support.

Ethical approval

This study was approved by the Erciyes University Faculty of Medicine's Ethics Committee (Ref No. 2011/277; 2011 May 03).

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