

# Education of Parents in Increasing Breastfeeding Rates, Success, and Self-Efficacy Levels

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#### ABSTRACT

**Aim:** This study aimed to determine the effect of breastfeeding education given to parents in the early postpartum period on the duration of exclusive breastfeeding for the first six months, breastfeeding success and breastfeeding self-efficacy levels of mothers.

**Materials and Methods:** This study had three groups including a control (n=49), intervention I (n=48) and intervention II group (n=48). As a nursing intervention, breastfeeding training using pre-structured training modules was given only to the mothers in intervention group 1 and to both the mothers and fathers in Intervention group 2. Routine nursing services were provided to the families in the control group. The infant feeding behaviors of the mothers in all three groups were monitored until the end of the sixth month. The parental introductory information form, infant follow-up form, LATCH diagnosis and evaluation scale and breastfeeding self-efficacy scale were used to collect the data.

**Results:** It was determined that the breastfeeding training given to mothers increased breastfeeding self-efficacy levels and breastfeeding success and this increase was statistically significant (p<0.05). It was determined that the difference between the supplemental nursing systems feeding rates for the intervention groups at the 1<sup>st</sup>, 2<sup>nd</sup>, 4<sup>th</sup> and 6<sup>th</sup> months were significantly higher than in the control group (p<0.05).

**Conclusion:** Breastfeeding training increased the mothers' breastfeeding self-efficacy and the duration of exclusive breastfeeding, but the fathers' support made no significant difference.

Keywords: Breastfeeding, parents, nursing, self-efficacy

#### Introduction

The neonatal period is one of the most sensitive periods of life. Newborns need to be fed sufficiently for healthy development (1). Breastfeeding is one of the most effective interventions that can benefit the child, the mother, and society (2). As a global public health proposal, babies should be exclusively breastfed for the first six months for optimal growth, health, and development (3). Exclusive breastfeeding (EBF) means not giving the baby any solids or liquids (including water) other than breast milk, with the exception of medicines and vitamins, for the first six months of life (4). The Global Breastfeeding Report, which assessed 194 countries, found that only 40% of infants under six months old were EBF and that only 23 countries had an EBF rate of above 60% (5).

Initiating and sustaining successful breastfeeding is a multidimensional process that includes not just the mother and her baby but also the family, community, and the health care system (6). While professional support is seen as an important element of breastfeeding success for mothers,

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Received: 20.05.2021 Accepted: 12.01.2022

\*This study was presented as a verbal paper at 2. International 7. National Pediatric Nursing Congress on November 27-30.

©Copyright 2022 by Ege University Faculty of Medicine, Department of Pediatrics and Ege Children's Foundation The Journal of Pediatric Research, published by Galenos Publishing House. the role of the woman's spouse in the decision to initiate and sustain breastfeeding is considered more critical (7). Therefore, in addition to mothers, fathers should also be involved in breastfeeding training programs. Studies on the fathers' involvement in breastfeeding training programs reported that training increases the fathers' knowledge of breastfeeding and prolongs the duration of EBF (1,8).

Breastfeeding self-efficacy is one of the requirements for breastfeeding success (9). It refers to the mother's selfconfidence to breastfeed her newborn or the adequacy she perceives in this regard. It affects the mother's desire and decision to breastfeed, efforts dedicated to breastfeeding, and her ability to deal with related difficulties (10). Perceived breastfeeding self-efficacy is a factor that can be influenced by health education (11). A longitudinal study in Singapore found that breastfeeding self-efficacy training increased breastfeeding self-efficacy and breastfeeding rates (12). Similarly, a study conducted in Iran showed that a selfefficacy intervention increased breastfeeding self-efficacy (13). Gümüşsoy et al. (14) reported that breastfeeding training given to mothers to increase their breastfeeding self-efficacy increased their perceived competence to breastfeed.

This study aimed to determine the effects of breastfeeding education given to parents in the early postpartum period on the duration of EBF for the first six months, breastfeeding success and the breastfeeding self-efficacy levels of the mothers.

## **Materials and Methods**

This quasi-experimental study was conducted using pre- and post-tests in the obstetrics clinics of a research hospital in the province of Erzincan, Turkey, from November 2016 to September 2017. The hospital is not part of the "Baby Friendly Hospital Initiative". The study population consisted of fathers and mothers of infants who were born in the research hospital. The sample of the research is; in this study, "G. Using the "Power-3.1.9.2" program, it was calculated before the data collection phase whether the sample size was sufficient at the 80% confidence level. Accordingly, for the effect size t-test of the study, the minimum total number of samples was determined to be 40 by taking 0.05 as the alpha value, 0.46 as the effect size and 80% as the theoretical power. Ten percent was added to each group to account for data loss. The study was conducted with a total of 145 parents who had full-term, healthy babies, did not have any breastfeeding problems, had no communication barriers, were literate, resided in the city center, and agreed to participate in this study. The participants were divided into an intervention group 1 (where only the mothers received breastfeeding training, n=48), an intervention group 2 (where both parents were given breastfeeding training, n=48), and a control group (routine breastfeeding training group, n=49).

## **Data Collection Instruments**

**Parental introductory information form:** This form, which was developed by the researcher, contains questions about the parents' socio-demographic characteristics, such as their age, education level, employment status, and income.

**Infant follow-up form:** This form developed by the researcher includes questions about the type of feeding.

**LATCH diagnosis and evaluation scale:** [Jensen et al. (15)] This scale was developed in 1993. The scale, whose Turkish validity was made by Yenal and Okumuş (16) in 2003 and whose Cronbach's Alpha value was 0.95, was recommended as a reliable tool. In this study, the Cronbach's Alpha value of the LATCH Breastfeeding Diagnosis and Evaluation scale was found to be 0.90. In this scale, which is similar to the apgar score system in terms of scoring, 0, 1, or 2 points are given for each criterion and breastfeeding is evaluated by adding the scores. The scores that can be obtained from the scale vary between 0 and 10. Increasing scores on the scale indicates breastfeeding success.

**Breastfeeding self-efficacy scale:** Originally developed by Dennis and Faux (17), this scale was revised to a 14-item short form in 2003. The validity and reliability of the scale in the Turkish setting was tested by Tokat (18). The Breastfeeding Self-Efficacy-Short Form uses a 5-point Likert-type scale (1= not at all confident, 5= very confident). The scores range from 14 to 70, with higher scores indicating higher breastfeeding self-efficacy (18).

## Intervention Instruments

A breastfeeding training program, which was prepared separately for mothers and fathers, a breastfeeding training booklet, and a baby model were used in the study.

**Breastfeeding training program and booklet for mothers:** Mothers in the intervention groups were verbally taught the benefits of EBF (for babies, mothers, and society), when to start breastfeeding, breastfeeding techniques, when to start offering the baby additional foods, how to burp the baby, practices that should be avoided during the breastfeeding period (e.g. the use of bottles and pacifiers), and the role of fathers in breastfeeding. The training materials, namely, a Power Point presentation and training booklet, were prepared in accordance with the literature.

**Breastfeeding training program and booklet for fathers:** Fathers in intervention group 2 were taught about the features of breast milk, the benefits of EBF (for babies, mothers, and society), the factors affecting the duration of EBF, the psychology of the baby and mother during breastfeeding, and the father's role in breastfeeding. A Power Point presentation and training booklet were prepared in accordance with the literature.

#### **Data Collection**

During the data collection stage, parents who met the research criteria were visited and informed of the research purpose, and their written informed consent was obtained. To prevent the groups from being influenced by each other, data were collected from the control group first, followed by intervention groups 1 and 2.

**Pre-intervention data collection:** After the mothers gave birth and breastfed their babies for the first time, the participants' consent was obtained as soon as the mothers were ready. The parental introductory information form and breastfeeding self-efficacy scale were administered to the control and intervention groups via face-to-face interviews. After the second breastfeeding session, information about the infants' nutritional status was recorded on the infant follow-up form and the LATCH breastfeeding diagnosis and evaluation scale was applied.

Intervention program: After the mother gave birth and the first breastfeeding was initiated, at the earliest time when the mother was resting and ready, a Breastfeeding Training Program was conducted only for the mothers in the first intervention group and for both mothers and fathers in the second intervention group. The training was given to the mothers in the first intervention group in an individual room in two 40-minute sessions. In the second experiment group, mothers and fathers were trained in their own individual rooms, which were single and seperate, in two 40-minute sessions. In addition, an additional 20-minute session was held for the fathers in the second intervention group. At the end of the training, the "Breastfeeding Education Booklet for Mothers" was given to the mothers and the "Breastfeeding Education Booklet for Fathers" was given to the fathers. No attempt was made by the researcher regarding the parents in the control group. These parents only benefited from the nursing services routinely provided in the hospital.

**Post-intervention data collection:** Four visits were made to the mothers (at the first, second, fourth, and

sixth months), during which information on the infants' nutritional status was recorded in the infant follow-up form and then the LATCH breastfeeding diagnosis and evaluation scale was applied by observation made during breastfeeding. At the six-month home visit, in addition to the infant follow-up form, the breastfeeding self-efficacy scale was administered to the mothers. The mothers in the intervention groups were asked to answer the questions after being called twice in the first and second weeks after discharge and by making the necessary reminders during the home visits. The home visits to the participants in the intervention groups were limited to 30 minutes, and the visits to the control group participants were limited to 10 minutes.

#### **Data Evaluation**

Statistical analysis of the data was performed using IBM SPSS v. 22. The Shapiro-Wilk test was used to assess the normal distribution of the data. Medians, interquartile ranges, frequencies, and percentage distributions were calculated.

The Kruskal-Wallis test was used to evaluate the study data, and Dunn's pairwise test was used for post hoc evaluations. Pearson's chi-square test and the Fisher-Freeman-Halton exact test were used to evaluate the qualitative data. The level of significance was set at p<0.005.

Ethical approval was obtained from the Atatürk University Faculty of Health Sciences Ethical Committee on September 23<sup>rd</sup>, 2016 (no. 2016/09/04), before this study was conducted. Permission to conduct this study was obtained from the research hospital on October 26<sup>th</sup>, 2016 (no. 43527969/605.99). After the necessary explanations were made about the research purpose and method, the parents' verbal and written consent was obtained.

#### Results

The demographic characteristics of the mothers and fathers included in this study are given in Table I. In this study, 38.8% of the mothers in the control group were primary school graduates, 81.6% were not working, and 69.4% had income equal to their expenses; it was determined that the mean age of the mothers was 30.51±5.82 years and the average number of children they had was 2.16±0.92. It was determined that 35.4% of the mothers in intervention group I were primary school graduates, 79.2% were not working, 70.8% of them had income equal to their expenses, the average age of the mothers was 29.19±4.56 years and their average number of children twos 1.98±0.84. It was determined that 39.6% of the mothers in intervention

group II were university graduates, 77.1% were not working, 56.3% of them had income equal to their expenses, the average age of the mothers was 29.92±5.21 years and their average number of children was 2.19±0.91. In terms of

maternal characteristics, the three groups were statistically similar to each other (p>0.05).

The demographic characteristics of the fathers included in the study are given in Table I. In the study, it was

				Cor gro	ntrol up	Experimental group 1		Experimental group 2		$\chi^2$ and p
				n	%	n	%	n	%	
	Prim	ary educati	on	19	38.8	17	35.4	14	29.2	$\chi^2 = 1.562$ p=0.816
Mother's education level	High	school		16	32.7	15	31.3	15	31.3	
	University			14	28.6	16	33.3	19	39.6	p 0.010
Father's education level	High	ary educati school ersity	on	14 17 18	28.6 34.7 36.7	11 18 19	22.9 37.5 39.6	7 19 22	14.6 39.6 45.8	χ <sup>2</sup> =2,845 p=0.584
Mother's employment	Employed			9	18.4	10	20.8	11	22.9	χ <sup>2</sup> =0.307
tatus	Unemployed			40	81.6	38	79.2	37	77.1	p=0.858
Father's employment status		loyed mployed		47 2	95.9 4.1	45 3	93.8 6.3	47 1	97.9 2.1	χ <sup>2</sup> =1.051 p=0.591
	Nuclear family			42	85.7	44	91.7	42	87.5	χ <sup>2</sup> =0.872 p=0.647
amily type	Extended family			7	14.3	4	8.3	6	12.5	
Income	Income <expenditure< td=""><td>13</td><td>26.5</td><td>12</td><td>25.0</td><td>17</td><td>35.4</td><td rowspan="3"> χ<sup>2</sup>=3,031  p=0.553</td></expenditure<>			13	26.5	12	25.0	17	35.4	χ <sup>2</sup> =3,031 p=0.553
	Income=expense			34	69.4	34	70.8	27	56.3	
	Income>expenditure			2	4.1	2	4.2	4	8.3	
Gender	Female Male			17 32	34.7 65.3	24 24	50 50	28 20	58.3 41.7	χ <sup>2</sup> =5,600 p=0.061
Breastfeeding	Yes			37	75.5	34	70.8	35	72.9	χ <sup>2</sup> =0.271
experience	No				24.5	14	29.2	13	27.1	p=0.873
Received breastfeeding	Yes			5	10.2	1	2.1	5	10.4	χ <sup>2</sup> =3,101 p=0.212
education (mother)	No			44	89.8	47	97.9	43	89.6	
Received breastfeeding education (father)	Yes No		4 45	8.2 91.8	3 45	6.3 93.8	6 42	12.5 87.5	χ <sup>2</sup> =1.207 p=0.547	
	Within 30 minutes after birth			32	65.3	36	75.0	34	70.8	χ <sup>2</sup> =2,065 p=0.724
irst time the infant vas breastfed	31-60 minutes after birth			6	12.2	6	12.5	7	14.6	
	61-120 minutes after birth			11	22.4	6	12.5	7	14.6	
	Control group			Exp	erimental	group 1	Expe	Experimental group 2		
	n	Median	IQR	n	Median	IQR	n	Median	IQR	
Aother's age	49	31	25.50-36.00	48	29	25.25-32.00	48	30	26.00-33.00	χ <sup>2</sup> <sub>KW</sub> =1.525 p=0.467
Father's age	49	33	29.50-39.00	48	31.5	28.00-35.75	48	34	30.00-36.75	χ <sup>2</sup> <sub>KW</sub> =3,673 p=0.159
Number of children	49	2	1.50-3.00	48	2	1.00-2.00	48	2	1.25-3.00	$\chi^2_{KW}$ =1.616 p=0.446

found that 36.7% of the fathers in the control group were university graduates, 95.9% were working, and the average age of the fathers was  $34.16\pm6.11$  years. It was determined that 39.6% of the fathers in intervention group I were university graduates, 93.8% were working, and the mean age of the fathers was  $31.98\pm4.49$  years. It was determined that 45.8% of the fathers in intervention group II were university graduates, 97.9% were working, and the average age of the fathers was  $33.21\pm4.63$  years. The demographic characteristics of fathers were statistically similar in all groups (p>0.05).

Table II shows the results of the pairwise comparisons of the EBF rates for the three groups. The EBF rates of the control group were lower than those of the two experimental groups in the first, second, and fourth months (p<0.05). There were no significant differences between the two experimental groups in terms of EBF rates at all followup periods (p>0.05).

As seen in Table III, the difference in the LATCH score average between the three groups is statistically insignificant at birth and at the  $6^{th}$  month (p>0.05). It was determined that the difference between the three groups at the  $1^{st}$ ,  $2^{nd}$  and  $4^{th}$  months was statistically significant (p<0.05). In advanced analysis (U) used to determine which groups the differences come from, it was determined that

the mean score of the control group was lower than the other groups at the 1<sup>st</sup>, 2<sup>nd</sup> and 4<sup>th</sup> months.

As seen in Table IV, the difference between the use of pacifier between the three groups at the 1st, 2nd, 4th and 6<sup>th</sup> months was statistically significant (p<0.05). In the advanced analysis (X<sup>2</sup>) performed to determine the originating group of the difference, it was determined that the pacifier usage rates in the control group were higher than the 1<sup>st</sup> experiment and 2<sup>nd</sup> experiment groups in the 1st, 2nd, 4th and 6th months. At the 1st, 2nd, 4th and 6<sup>th</sup> months, the difference in the rates of use of feeding bottles between the three groups was found to be statistically significant (p<0.05). In the advanced analysis performed to determine the originating groups of the differences, it was determined that the baby bottle usage rates in the control group were higher than the 1<sup>st</sup> experiment and 2<sup>nd</sup> experiment groups in the 1<sup>st</sup>, 2<sup>nd</sup>, 4<sup>th</sup> and 6<sup>th</sup> months.

Table IV shows the results of Dunn's pairwise comparisons for the three groups. The control group had lower selfefficacy scores than the two experimental groups (p<0.001, adjusted using the Bonferroni correction). No significant differences were found between the two experimental groups with regard to self-efficacy scores (p>0.05; Table V).

	Measurement time	Control group		1 <sup>st</sup> experimental group		2 <sup>nd</sup> experimental group		Test and significance
		n	%	n	%	n	%	
EBF	At birth	30	61.2	35	72.9	30	62.5	χ²=1,756, p=0.416
	1 <sup>st</sup> month	21	42.9	39	81.3	45	93.8	χ <sup>2</sup> =34,243, <b>p=0.000</b>
	2 <sup>nd</sup> month	19	38.8	37	77.1	41	85.4	χ <sup>2</sup> =27,181, <b>p=0.000</b>
	4 <sup>th</sup> month	19	38.8	36	75.0	36	75.0	χ <sup>2</sup> =18,214, <b>p=0.000</b>
	6 <sup>th</sup> month	19	38.8	36	75.0	36	75.0	χ <sup>2</sup> =18,214, <b>p=0.000</b>

EBF: Exclusive breastfeeding

### Table III. Comparison of LATCH scores between groups

		Control group		1 <sup>st</sup> experimental group		2 <sup>nd</sup> experir	nental group	Test and
	Measurement time	Mean	SD	Mean	SD	Mean	SD	significance
LATCH	At birth	5.18	1.79	5.21	1.66	5.08	1.41	F=0.079, p=0.924
	1 <sup>st</sup> month	9.12	0.90	9.54	0.80	9.58	0.74	χ <sup>2</sup> <sub>KW</sub> =10.540, <b>p=0.00</b>
	2 <sup>nd</sup> month	9.04	2.42	9.69	1.49	9.90	0.42	χ <sup>2</sup> <sub>KW</sub> =13.316, <b>p=0.001</b>
	4 <sup>th</sup> month	8.47	3.51	9.17	2.79	9.58	2.02	χ <sup>2</sup> <sub>KW</sub> =8.061, <b>p=0.018</b>
	6 <sup>th</sup> month	8.16	3.91	8.71	3.34	9.38	2.45	$\chi^{2}_{KW}$ =3.252, p=0.197

SD: Standard deviation

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	Measurement time	Control group		1 <sup>st</sup> experimental group		2 <sup>nd</sup> experimental group		Test and
		n	%	n	%	n	%	significance
	At birth	5	10.2	2	4.2	1	2.1	-
	1 <sup>st</sup> month	23	46.9	10	20.8	4	8.5	χ <sup>2</sup> =19,446, <b>p=0.000</b>
Pacifier use	2 <sup>nd</sup> month	27	55.1	13	27.1	6	12.5	χ <sup>2</sup> =20,031, <b>p=0.000</b>
	4 <sup>th</sup> month	28	57.1	17	35.4	10	20.8	χ <sup>2</sup> =13,771, <b>p=0.001</b>
	6 <sup>th</sup> month	28	57.1	17	35.4	10	21.8	χ <sup>2</sup> =13,771, <b>p=0.001</b>
Use of feeding bottle	At birth	4	8.2	1	2.1	-	-	-
	1 <sup>st</sup> month	14	28.6	7	14.6	2	4.3	χ <sup>2</sup> =10,672, <b>p=0.005</b>
	2 <sup>nd</sup> month	19	38.8	10	20.8	5	10.4	χ <sup>2</sup> =11,137, <b>p=0.004</b>
	4 <sup>th</sup> month	21	42.9	10	20.8	10	20.8	χ <sup>2</sup> =7,759, <b>p=0.021</b>
	6 <sup>th</sup> month	22	44.9	10	20.8	10	20.8	χ <sup>2</sup> =9,131, <b>p=0.010</b>

 Table V. Comparison of the Self-Efficacy scale averages before and after training

	N	Control group		1 <sup>st</sup> experimental group		2 <sup>nd</sup> experimental group		Test and significance
	Measurement time	Mean	SD	Mean	SD	Mean	SD	
Self-Efficacy scale	Before the training	54.86	6.76	56.29	6.26	56.98	6.28	χ² <sub>кw</sub> =3,175, p=0.204
	6 months after	54.20	12.87	61.29	8.51	62.60	8.76	χ <sup>2</sup> <sub>KW</sub> =18,752, <b>p=0.000</b>

## Discussion

Although the importance of breastfeeding in terms of infant and child health is a phenomenon that has been accepted in all countries of the world, UNICEF has reported the rate for infants fed with SAS for the first six months to be 39% (5). According to the 2018 data of TPHR (TNSA; Turkish Population and Health Research), the rate of babies breastfed for a certain period of time in our country is 98%, and the rate of babies who have supplemental nursing systems (SNS) in the first 2 months of their lives is 45%, and this rate decreases to 14% when the baby is 4-5 months old (19). There are various reasons affecting the gradual decrease in the rate of SNS during the first 6 months. One of the most remarkable of these reasons is the low level of knowledge and motivation of mothers towards breast milk and breastfeeding (6). It has been noticed when the literature is reviewed that the number of studies investigating the effects of paternal support and breastfeeding education in the early postpartum period upon breastfeeding outcomes has been increasing. In this sense, the research has provided target-driven and individualized guidance for breastfeeding after birth for mothers and fathers and maintained infant monitoring and counseling visiting homes during the postpartum first six months. When the findings of this research are evaluated, it can be seen that

although the rates of SNS in the first sixth months of the baby's life are similar, there was remarkable information revealing the positive effects upon breastfeeding success, the breastfeeding self-efficacy levels of mothers and pacifier and bottle use.

It was found in this research that the participation of the fathers in the breastfeeding education process in the postpartum period and the breastfeeding support given in the first six months after birth increased the rate of EBF at the end of the 4<sup>th</sup> month. However, it did not create a difference at the end of the 6<sup>th</sup> month. The number of studies in the literature carried out on the fathers' participation in breastfeeding support has been increasing recently. Although there have been many research results indicating that the fathers' participation in the breastfeeding process increases the rate of EBF (20-24), there has also been evidence that support the view that the father does not change the rate of EBF, or even affects it negatively (25-27). It is believed that these differences in the results of the study could arise from varying income levels and cultural factors. There could also be significant differences in the role of fathers between high- and middle-income families. The roles of males and females in middle-income families are markedly different; males have culturally tended to be responsible for providing financial support for food, clothing, and health care.

Furthermore, unlike fathers in high-income countries, middle-income fathers rarely accompany their spouses to antenatal or postnatal appointments (28). In this sense, it has been considered that the similarity in the rates of SNS as of the sixth month in the research results could have arisen from cultural factors because the sample group was chosen from a province in the east of the country.

"Successful breastfeeding" is defined in different ways such as "the duration of breastfeeding is an indicator of breastfeeding success," "successful breastfeeding is the success felt by the mother" or "an interaction process that results in mutual satisfaction of mother and baby needs" (29). Various factors are efficient for initiating and maintaining successful breastfeeding, and the role of health professionals is significant. It has been noticed in the research that counseling services on breastfeeding starting in the hospital and continuing with home visits, and the participation of fathers in these services has increased the success of breastfeeding. Similarly, previous studies have revealed that breastfeeding success of mothers has increased with health education (29-31). In line with these results, it is considered that breastfeeding education for initiating and strengthening breastfeeding both prepares mothers for breastfeeding gradually and effectively and increases breastfeeding success and so enables mothers to better cope with the difficulties in the breastfeeding process.

Recommendations for pacifier use differ all around the world. The American Academy of Pediatrics recommends the use of pacifiers to prevent Sudden Infant Death Syndrome, and pacifiers can be introduced at about 3 to 4 weeks of age after breastfeeding is well established (32). In contrast, the WHO does not recommend using a pacifier in breastfeed children as one of the "Ten Steps to Successful Breastfeeding" on which the "Baby-Friendly Hospital Initiative" is based (33). It was found in this study that the participation of fathers in the breastfeeding education process decreased the rates of pacifier and bottle use. Other studies that have been carried out similarly have reported that breastfeeding education decreased the rates of pacifier use (21,34,35).

It was seen in this study that both the fathers' participation in the breastfeeding education process in the postpartum period and breastfeeding support given in the first six months after birth increased the breastfeeding self-efficacy level of the mothers. The perception of breastfeeding self-efficacy is an important factor upon both initiating and maintaining breastfeeding. Breastfeeding behavior can be

changed through health education, it is affected by spousal support, and it affects breastfeeding success (13,36,37). In this study and other studies based on this theory, it has been reported that paternal participation and breastfeeding education given in the early postpartum period both increase the level of breastfeeding self-efficacy and they are efficient at initiating and maintaining breastfeeding (38,39). These findings we obtained provide important data on the importance of the fathers' involvement in breastfeeding education and counseling services in the hospital and the importance of increasing the perception of breastfeeding self-efficacy.

### **Study Limitations**

The research has several limitations. Firstly, there was no randomization between the groups. Secondly, the researchers were not blind to the study groups. In addition, the mothers were not put into multiparous or primiparous groups in this study, so the high number of mothers with breastfeeding experience in the groups may have affected the results of this study. Results for this study should not be generalized to other samples; instead, these findings are valuable for constructing theories and hypotheses about the issues that need to be explored in future qualitative and quantitative designs with a variety of samples.

## Conclusion

Despite its limitations, this quasi-experimental design provides important evidence about the effects of the fathers' involvement in postpartum breastfeeding on EBF rates, breastfeeding self-efficacy levels, and breastfeeding success. To include fathers, future research should consider the socio-economic and cultural context when designing and implementing any intervention. In addition, randomized controlled studies should be included in the future to obtain stronger results. Furthermore, it is recommended to determine at risk groups and provide the necessary support by applying the postnatal breastfeeding selfefficacy scale in the first breastfeeding attempt to mothers who give birth in obstetrics clinics, by emphasizing the perception and importance of breastfeeding self-efficacy during in-service training programs for breastfeeding, and by providing information which mothers in the prenatal and breastfeeding process can reach at any time. It may be considered beneficial to establish breastfeeding service units within health institutions where mothers can receive support and to include fathers in breastfeeding education programs.

#### Ethics

**Ethics Committee Approval:** Ethical approval was obtained from the Atatürk University Faculty of Health Sciences Ethical Committee on September 23, 2016 (no. 2016/09/04).

**Informed Consent:** After the necessary explanations were made about the research purpose and method, the parents' verbal and written consent was obtained.

Peer-review: Externally and internally peer-reviewed.

#### **Authorship Contributions**

Concept: G.A., A.Ç., Design: G.A., A.Ç., Data Collection and/or Processing: G.A., Writing: G.A., A.Ç.

**Conflict of Interest:** The authors declared that there were no conflicts of interest.

**Financial Disclosure:** The authors declared that this study has received no financial support.

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