# The role of positive family relationships and spousal support in breastfeeding self-efficacy and success of mothers in the early postpartum period

Ayla Acikgoz<sup>1</sup>, Selda Yoruk<sup>2</sup>

<sup>1</sup>Vocational School of Health Services, Dokuz Eylul University, Izmir, Turkey <sup>2</sup>Department of Midwifery, Faculty of Health Sciences, Balikesir University, Balikesir, Turkey

Abstract. Aim: This study aimed to determine the relationship between mothers' positive family relationships, spousal support, and other factors with breastfeeding success and breastfeeding self-efficacy in the early postpartum period. Methods: This cross-sectional study was conducted in the largest maternity hospital in a city in the western part of Turkey. The sample consisted of 532 women and their babies who met the sampling criteria. As data collection tools, descriptive data form, Breastfeeding Self-Efficacy Scale-Short Form (BSES), and LATCH Breastfeeding Assessment Tool were used. Results: BSES and LATCH mean scores of primiparous mothers were found to be lower, while the mean BSES and LATCH scores of mothers without postpartum health problems were higher. The LATCH mean score of the mothers who received prenatal care during pregnancy was higher. The mean BSES scores of mothers who had a positive relationship with their spouse, their own family, and their spouse's family, who received sufficient support from their spouse regarding baby care, and who were not stressed higher. However, these variables did not affect the LATCH score. It was found that as the BSES scores of the mothers increased, their breastfeeding success also increased. Conclusion: The results of this study may be a guide for healthcare professionals who provide breastfeeding counseling services to the mother during the perinatal period. In order to increase breastfeeding success, mothers' breastfeeding experience should be questioned, prenatal care should be provided, postnatal health problems should be eliminated, and mothers' self-efficacy levels should be increased.

Key words: Breastfeeding, breastfeeding success, self-efficacy

# Introduction

Breast milk is the best food that meets the nutritional needs of the baby during the first six months after birth (1). Feeding with breast milk promotes healthy growth and development of the baby and decreases infant morbidity and mortality (2). Also, it contributes to both the family and the national economy. As breast milk meets the psychosocial needs of the baby, it has been stated worldwide that breastfeeding is beneficial for both mother and baby health (1–5). It is recommended by the World Health Organization (WHO) and The United Nations Children's Fund that babies should exclusively be fed breast milk for the first six months following birth, additional foods should be started from the seventh month, and breastfeeding should continue until the age of two (1,2). The rates of breastfeeding initiation in the first hour and giving exclusively breast milk in the first six months are among the most important child health indicators of a country (1,3,6). However, more than half of the infants worldwide do not meet these recommendations. That is, the breastfeeding initiation rate in the first hour following birth is 44% while the rate of exclusive breastfeeding before six months old is 40%. Additionally, 45% of two-year-olds continue to be breastfed (6).

According to the results of the Turkish Demographic and Health Survey in 2018 (TDHS-2018), the breastfeeding rate varies according to sociodemographic characteristics and access to health services. Although breastfeeding has been supported in Turkey for many years, there are ongoing problems related to breastfeeding in the first six months, and additional nutrition to infants starts early (7). The rate of exclusively breastfed infants rapidly decreases with age; it decreases from 59% in 0-1-month babies, to 45% in 2-3-month babies, and to 14% in 4-5-month babies (7). Increasing breastfeeding rates is a national priority in Turkey. However, the initiation and duration of breastfeeding fall short of national targets. It has been shown that breastfeeding self-efficacy is a strong predictor of both the onset and duration of breastfeeding and therefore an important feature to be measured (8,9).

In some studies, the problems experienced by mothers in breastfeeding have been shown as the reason for starting additional food early and stopping breastfeeding in the early period (3-5). The concerns of mothers about the success of breastfeeding, the adequacy of their milk, and the low level of breastfeeding self-efficacy can affect breastfeeding (10-12). Self-efficacy is the competence an individual feels about performing a certain behavior. It determines the motivation that an individual has about an activity (3,13-15). The maternal breastfeeding self-efficacy perception may affect whether the mother will breastfeed, how much effort she will put into breastfeeding, and how they feel about breastfeeding (8,10,16). Mothers with high self-efficacy try solving problems by thinking positively about the problems they encounter in the postnatal period and prefer breastfeeding more. They believe that their babies should be breastfed, and they exhibit successful breastfeeding behavior (8,11,12,15).

The mother's willingness to breastfeed is an important factor in increasing breastfeeding success (initiating breastfeeding early, continuing breastfeeding, giving exclusively breast milk for the first six months). It is stated that the psychological state of the mother in the postnatal period has a negative effect on the mother's breastfeeding. The poor mental health of the mother, high levels of stress and anxiety, and lack of communication between mother and baby can affect breastfeeding success (4,5,9,17).

The social and verbal support of the immediate environment for breastfeeding is an important factor affecting the mother's feeling of strength. The mother's positive relationship with her relatives and spouse affects her psychology positively (18). The psychological state of the mother for breastfeeding – *emotional comfort for success* – is critical, since anxiety and stress can affect the mother's milk secretion reflex and reduce breast milk production (9).

The support of the spouse in all aspects regarding breastfeeding is an important factor affecting the mother's feeling of safety. In studies conducted in different countries, it was found that mothers who are supported by their spouses in breastfeeding have longer breastfeeding periods and higher breastfeeding selfefficacy (18-20). In Turkey, the number of studies regarding the relationship between spousal and relative support during the postpartum period with breastfeeding self-efficacy is limited (21-23). Uluda et al. found that spousal support increased the perception of breastfeeding self-efficacy (23). Cinar et al. showed that social support received from family (mother, father, spouse, children, siblings) increased breastfeeding self-efficacy, but social support received from friends and other people did not affect breastfeeding self-efficacy (22). Aydın Özkan et al. showed that receiving support in infant care increased breastfeeding self-efficacy, but the study did not specify who gave support in infant care (21). No study in Turkey examines all the variables together.

This study aimed to determine the relationship between the mother's family, her spouse's family, the positive relationship between spouses, spousal support for baby care, and other factors with breastfeeding success and breastfeeding self-efficacy in the early postpartum period. It was also aimed to determine the relationship between breastfeeding self-efficacy perception and breastfeeding success.

#### Material and methods

#### Design and Sample of the Study

This cross-sectional study was conducted in Ataturk City Hospital, the largest maternity hospital

in Balikesir, in the western part of Turkey. This hospital is a baby-friendly hospital and trained nurses/ midwives work in breastfeeding counseling. The data were collected between 01 January and December 31, 2019. 4575 pregnant women admitted to the hospital in 2019 were defined as the population of the study. In TDHS-2018, the frequency of exclusively breastfed babies aged 0-1 month is 59%. The sample of the research (exclusively breastfeeding prevalence 59%, 5% margin of error, 95% confidence interval, and the design effect: 1.5) was calculated as 516. OpenEpi, Version 3, an open-source calculator was used to calculate the sample size. 5% of people were taken as substitutes for the limitations to be encountered in accessing the sample or the possibility of refusing to participate in the study. The number of people whom we would like to reach was 541. A total of 541 women who gave birth at the hospital in which the study was conducted on the specified dates, who agreed to participate in the study, and who met the sample criteria of the study were included. Nine of the women were excluded from the study because they did not want to continue. Finally, the study sample consisted of 532 women.

#### Sampling Criteria

Women who were  $\geq 18$  years old, who were literate, who could speak Turkish, who delivered term and healthy births (born 38–42 weeks, 2500–4000 g, no known congenital disease, and gave birth to a single baby), who breastfed and had no chronic disease that prevented breastfeeding were included in the study.

# Data Collection Tools

Descriptive data form, Breastfeeding Self-Efficacy Scale-Short Form, and LATCH Breastfeeding Assessment Tool were used as data collection tools.

#### Descriptive Data Form

This form consists of 25 questions determining the sociodemographic characteristics, some characteristics of pregnancy, birth and postpartum, and family. The form was created by the researchers using the literature (10,13,14,24-29). Within the scope of the face-validity testing, two experts in the field of Public Health were consulted. The pilot application of the questionnaire was filled out to 10 randomly selected mothers and thus, its clarity was evaluated.

#### Breastfeeding Self-Efficacy Scale-Short Form

The original version of the scale was first developed by Dennis and Faux in 1999 as a 33-item scale. With this scale, to what extent mothers feel competent about breastfeeding can be evaluated. It was stated that this scale is appropriate to be administered in the postnatal period. All items on the scale have a positive meaning. In the pilot study, it was determined that there was a redundancy of items in the scale in the consistency analyzes, and therefore, items with itemtotal correlation below 0.60 were removed and a new Breastfeeding Self-Efficacy Scale (BSES) consisting of 14 items was developed (17,30). The Cronbach alpha value of the short form of this scale was found to be 0.94. For the construct validity of the scale, factor analysis, comparison of known groups, and correlation analysis with self-esteem and motherhood mood were performed. The scale is 5-point Likert-type and is evaluated in a way that I am not confident at all (1 point) to I am always confident (5 points). The minimum score to be obtained from the scale is 14, while the highest possible score is 70. The scale does not have a cut-off point, and a higher score means that the mother's breastfeeding self-efficacy is high (17,30). The scale was adapted to Turkish by Aluş-Tokat and Okumuş in 2010. The Cronbach's alpha value of the scale was found to be 0.86, and it was determined that it is a reliable scale that can be applied to Turkish mothers in the postpartum period (31).

#### LATCH Breastfeeding Assessment Tool

To obtain information about the breastfeeding capabilities of mothers, the LATCH Breastfeeding Assessment Tool is a method that is extensively and systematically used. This tool was created by analogy with the APGAR scoring method in terms of the scoring method. This tool is quick and easy to evaluate. It has been developed to diagnose breastfeeding objectively, to detect breastfeeding problems and to

make training plans, to create a common language among healthcare professionals, and to be used in research. This measurement tool consists of five evaluation criteria and is a combination of the first letters of the English equivalent of these criteria. The letters of the acronym LATCH denote the areas of the charting system, as follows: (L) for how well the baby attaches to the breast (Latch on breast), (A) for the number of swallows (Audible swallowing), (T) for the nipple type (Type of nipple), (C) for the maternal comfort grade (Comfort breast/nipple) and (H) for the amount of assistance that the mother requires when holding her baby to her breast (Hold). It has been determined that the LATCH Breastfeeding Assessment Tool is reliable and can be used as an objective assessment tool to evaluate breastfeeding (10,32). When assessing with this measurement tool, it is sufficient to observe at any time of breastfeeding (32). Each item is scored between 0 and 2 points. The total score to be obtained from this tool is 10 and there is no cut-off point. The higher the LATCH score is, the higher the breastfeeding success is (33,34). The Turkish adaptation, the validity, and reliability of the scale were performed by Yenal and Okumuş and the Cronbach alpha value was found to be 0.95 (32).

# Data Collection

The descriptive and BSES-Short Form data of the study were collected by face-to-face interview method within the first 24–48 h after birth at the hospital. To evaluate the LATCH scale, the observation method during breastfeeding was used. Any spontaneous breastfeeding time within the first 24–48 h postpartum was observed. Breastfeeding was watched without any intervention and the LATCH scale was filled during the observation. The reason for choosing this period was that problems related to breastfeeding are mostly experienced during this period and mothers' self-efficacy perception is lower in the first period. The forms were filled in approximately 20 min.

At the stage where the data were collected, the breastfeeding success and self-efficacy perception of the mothers were evaluated by the researchers. Necessary care, support, and training were provided to mothers before discharge.

#### Statistical Analysis

Continuous variables were presented as mean and standard deviation while categorical variables were explained as number and frequency. The normality of the data was analyzed with the Kolmogorov-Smirnov test. Parametric tests were used in statistical analysis since the data were found to be suitable for the normal distribution. The relationship between the sociodemographic, obstetric, and familial characteristics of the mothers and the LATCH score was analyzed by t-test. One-way ANOVA was used for variables that were more than two groups. When a significant difference was found between the analysis of variance and group means, Tukey test, one of the "post hoc" analysis methods, was used. Pearson correlation analysis was used to examine the relationship between the BSES score and the LATCH score. Statistical analysis was performed using Statistical Package for Social Sciences Version 20.0 (IBM Corp., Armonk, NY, USA). P values of <0.05 were considered statistically significant.

#### Ethical Approval

Ethics approval was obtained from Balikesir University Medical Faculty Clinical Research Ethics Committee (no: 10/01/2018-01). Before collecting the data of the study, written permission was obtained from the provincial health directorate and the hospital where the study would be conducted. The sample chosen for the study was based on volunteers. The women who agreed to participate in the study were informed about the purpose and application of the study and their consent was obtained. Those who did not agree to respond were excluded from this study.

# Results

The mean age of the mothers was  $29.5 \pm 5.6$  (min: 17, max: 45), 53.6% of them were in the 26–34 age group. 57.0% of mothers had a high school and higher education, 23.9% were working. 49.2% of the mothers were primiparous, and 61.5% of them gave birth by cesarean. No significant relationship was found between the

sociodemographic characteristics of the mothers and the mean BSES and LATCH score (p >0.05, Table 1).

The mean BSES scores of mothers in the 20–25 age group who initiated breastfeeding within the first hour after birth, and without postpartum health problems were found to be higher than those in the other groups (p <0.05). The mean BSES and LATCH scores of primiparous mothers were lower than multiparous mothers (p <0.05). The mean LATCH score of mothers who received prenatal care during pregnancy and mothers without postnatal health problems was higher (p <0.05, Table 2).

The BSES mean scores of the mothers whose spouse's education was at the primary school level were higher than those of their spouse's education was at high school and university level (p <0.05). The BSES scores of mothers who had a good relationship with their spouse, who had a good relationship with their family, and who had a good relationship with their spouse's family were higher than those with a bad relationship (p <0.05). The mean BSES score of the mothers who were satisfied with their marriage, who received adequate support from their spouses in baby care, and who thought that baby care was easy was higher (p <0.05). The mean BSES score of the mothers who stated that there was no serious stress in their life was higher than those who were stressed (p <0.05). There was no significant relationship between

the mothers' familial characteristics and the mean LATCH scores (p >0.05, Table 3).

## Discussion

WHO recommends giving exclusive breastfeeding to babies for the first 6 months and breastfeeding for a year or longer (1,6). The duration of breastfeeding is related to breastfeeding success. The main reasons that negatively affect breastfeeding and its effectiveness are that mothers do not feel competent and self-confident about breastfeeding (35,36). Therefore, in this study, the factors affecting the breastfeeding self-efficacy level and successful breastfeeding of mothers after birth were examined. The relationship of positive family relationships and adequate spousal support with these variables was investigated. In summary, in this study, the BSES and LATCH mean scores of primiparous mothers were found to be lower. The mean LATCH score of mothers who received prenatal care and mothers without postnatal health problems was higher. The mean BSES score of mothers who started breastfeeding within the first hour after birth and those without postpartum health problems was higher. The mean BSES score of mothers whose spouse's education was low, who had a good relationship with their spouse, their own family, and

Characteristics		n (%)	LATCH Mean±SD	р	BSES Mean±SD	р
Age group (years)	18-25	137 (25.8)	7.54±2.01	0.422	59.44±7.82	0.545
	26-34	285 (53.6)	7.79±1.94		59.14±9.20	
	≥35	110 (20.7)	7.60±2.00		60.21±8.17	
Educational level	Primary	229 (43.0)	7.77±1.94	0.723	59.94±8.15	0.281
	High School	167 (31.4)	7.62±1.97		59.56±8.07	
	University	136 (25.6)	7.63±2.02		58.46±10.02	
Employment status	Worker	127 (23.9)	7.89±1.85	0.182	58.92±9.49	0.434
	Non-worker	405 (76.1)	7.62±2.00		59.60±8.37	
Age of marriage	15-19	135 (25.4)	7.70±2.06	0.803	60.54±8.03	0.093
	20-25	298 (56.0)	7.70±1.96		59.51±8.37	
	26-29	68 (12.8)	7.75±1.67		57.39±10.22	
	30 and older	31 (5.8)	7.35±2.27		58.48±9.59	

Table 1. The sociodemographic characteristics of mothers and the relationship between LATCH and BSES scores (n= 532)

			LATCH		BSES	
Characteristics		n (%)	Mean±SD	р	Mean±SD	р
First gestational age	16-19	88 (16.5)	7.63±2.15	0.460	59.67±8.05	0.002
	20-25	273 (51.3)	7.75±1.96		60.64±8.06	
	26-29	120 (22.6)	7.76±1.81		57.13±9.68	
	≥30	51 (9.6)	7.29±2.06		58.05±9.07	
Number of children	1	262 (49.2)	7.34±1.98	0.001	57.96±8.64	0.001
	2	176 (33.1)	7.95±1.93		60.90±7.25	
	≥3	94 (17.7)	8.17±1.83		60.82±10.32	
Planned pregnancy	Yes	410 (77.1)	7.66±1.95	0.552	59.53±8.39	0.674
	No	122 (22.9)	7.78±2.03		59.15±9.51	
Health problems in	Yes	133 (25.0)	7.91±1.96	0.131	58.39±8.73	0.105
pregnancy	No	399 (75.0)	7.61±1.97		59.79±8.60	
Antenatal care attendance	Yes	420 (78.9)	7.78±1.97	0.042	59.45±8.61	0.972
	No	112 (21.1)	7.35±1.93		59.41±8.83	
Type of birth	Vaginal birth	205 (38.5)	7.87±2.00	0.097	60.18±8.05	0.121
	Cesarean birth	327 (61.5)	7.58±1.94		58.98±8.98	
The time of breastfeeding initiation	Within the first hour	403 (75.8)	7.76±1.92	0.164	60.34±8.21	0.001
	After the first hour	129 (24.2)	7.47±2.10		56.64±9.40	
Postpartum health	Yes	181 (34.0)	7.45±2.13	0.048	57.23±9.43	0.001
problem	No	351 (66.0)	7.81±1.87		60.58±7.99	]
Gender of the baby	Male	262 (49.2)	7.61±1.97	0.386	59.48±9.01	0.926
	Female	270 (50.8)	7.76±1.97		59.41±8.31	

Table 2. The relationship between the mother's obstetrics characteristics and LATCH and BSES scores (n= 532)

their spouse's family was higher than those with a bad relationship. The mean BSES score of mothers who were satisfied with their marriage, who received adequate support from their spouses in baby care, who thought that baby care was easy, and who were not stressed was higher. It was found that as the BSES scores of the mothers increased, their breastfeeding success also increased.

Maintaining successful breastfeeding is one of the most important health goals for both the baby and mother. The mean breastfeeding success score of the mothers in our study, evaluated with the LATCH breastfeeding rating scale, was moderate. In Turkey, the LATCH score has been found as moderate even if in some studies conducted in previous years, it was found as slightly lower than our study (24,37), while in others slightly higher (13,14,38). In a study by Tornese et al. conducted retrospectively from medical records in Italy, the mean of LATCH score was found to be higher in exclusively breastfed infants than in non-exclusively breastfed infants (10). In a study in which breastfeeding success was measured for the first 6 weeks after delivery, it was observed that those with higher LATCH scores in the measurements performed at birth and 48 hours/discharge continued exclusively breastfeeding in the sixth week (39). In our study, the mean-breastfeeding self-efficacy score of the mothers evaluated with the BSES was 59.4. The mean BSES scores in studies conducted in previous years in Turkey were close to our findings in some studies (14,22,24,40) and slightly lower in some others (13,21,23,41). In a prospective study conducted in Ireland, while the mean BSES was 44.1 during pregnancy, it was found to be higher

Ch	aracteristics	n (%)	LATCH Mean±SD	р	BSES Mean±SD	р
Spouse's educational level	Primary	182 (34.2)	7.66±1.90	0.927	61.07±7.83	0.007
	High School	190 (35.7)	7.67±2.04	]	58.58±8.24	
	University	160 (30.1)	7.74±1.96		58.60±9.73	
Family income	Income is higher than expenses	43 (8.1)	8.02±2.04	0.146	56.88±10.02	0.057
	Income equals expenses	408 (76.7)	7.72±1.93		59.89±8.31	
	Income is lower than expenses	81 (15.2)	7.34±2.10		58.55±9.32	
Family type	Nuclear family	455 (85.5)	7.74±1.92	0.128	59.44±8.78	0.530
	Extended family	77 (14.5)	7.37±2.24		59.46±7.88	
The relationship	Good	498 (93.6)	7.69±1.97	0.970	59.93±8.30	0.001
with the spouse	Bad	34 (6.4)	7.70±2.00		52.32±10.45	
The relationship	Good	481 (90.4)	7.65±1.97	0.214	59.83±8.41	0.001
with the family	Bad	51 (9.6)	8.01±2.00		55.78±10.00	
The relationship	Good	457 (85.9)	7.62±1.98	0.058	60.18±8.20	0.001
with the spouse's family	Bad	75 (14.1)	8.09±1.91		54.94±9.93	
Pleasing with marriage	Yes	502 (94.4)	7.71±1.96	0.223	59.85±8.41	0.001
	No	30 (5.6)	7.26±2.16		52.56±9.75	
Spousal support for	Adequate	457 (85.9)	7.64±1.96	0.207	60.13±8.36	0.001
baby care	Inadequate	75 (14.1)	7.96±2.04		55.22±9.20	
Thinking baby care is easy	Yes	345 (64.8)	7.61±1.95	0.193	60.84±8.17	0.001
	No	187 (35.2)	7.84±1.99		56.86±8.92	
The existence of	Yes	57 (10.7)	7.26±1.85	0.081	55.94±10.95	0.001
current stress in the life	No	475 (89.3)	7.74±1.98		59.86±8.24	

Table 3. Relationship between the mother's familial characteristics and LATCH and BSES scores (n= 532)

The mean BSES score of the mothers participating in our study was  $59.44 \pm 8.65$ , and the mean LATCH score was  $7.69 \pm 1.97$ . A positive, significant correlation was found between the BSES score and the LATCH score (r = 0.15, p < 0.001, Table 4).

 Table 4. Correlation between LATCH score and Breastfeeding

 Assessment Tool

Scales	n	Mean±SD	Min	Max	r	р
LATCH	532	7.69±1.97	1.0	10.0	0.15	0.001
BSES	532	59.44±8.65	14.0	70.0		

(50.1) in the postpartum sixth week (12). In a cohort study that was followed up for seven months in the postpartum period, it was determined that the mean BSES of mothers in the first four months increased gradually, starting from the moderate level, but decreased in the following months (42). Although the breastfeeding ability of the mother and the sucking ability of the baby are important at the beginning of successful breastfeeding, a supportive breastfeeding environment, free from unnecessary interventions, is also important in maintaining it (43). Objectively determining the breastfeeding success and breastfeeding self-efficacy of the mother by nurses and midwives who provide postnatal breastfeeding counseling may guide the continuation of breastfeeding.

In our study, no relationship was found between sociodemographic characteristics of mothers and breastfeeding success (LATCH score). In the literature, a relationship was found between advanced age

 $(\geq 30)$  (38), low education level (38), and long duration of marriage (13) with breastfeeding success. In our study, the mean BSES and LATCH scores of primiparous mothers were lower than that of multiparous mothers. As the number of pregnancies increases, the number of living children also increases. Özkan et al. found that as the number of pregnancies increased, the mean LATCH score also increased significantly (38). In the literature, studies have shown that women who give three or more births and experience breastfeeding have better breastfeeding success (13,38) and have higher levels of self-efficacy (13,21). In recent studies, a positive relationship has been shown between multiparity and breastfeeding self-efficacy of mothers (11,21,24,27). These findings are consistent with the findings of our study. To increase breastfeeding self-efficacy and breastfeeding success of mothers and to promote successful breastfeeding, it is recommended that healthcare professionals who provide breastfeeding consultancy should focus on primiparous women with no experience of breastfeeding.

In our study, the mean BSES score of the mothers in the 20–25 age group was higher than the other age groups. When the characteristics of the mothers were examined, it was determined that most mothers in this age group were multiparous and had prenatal care. As the age of the mother and the number of births increase, the experience of breastfeeding also increases (11-13). Breastfeeding experience and information about breastfeeding from healthcare professionals might have increased breastfeeding self-efficacy.

In this study, the mean BSES and LATCH score of mothers without postpartum health problems were higher. The result of the study by Kılcı et al. is consistent with our finding (24). The fact that mothers have a physical health problem after birth may have caused the postponement of baby care and breastfeeding behavior. Psychological problems of the mother can also affect breastfeeding success. In the literature, it has been shown that postpartum pain and stress (28,37) and depression (21,42) decrease breastfeeding success. In our study, it was determined that stress was not related to breastfeeding success but breastfeeding self-efficacy of mothers who were not stressed was higher. In parallel with our findings, there are studies in the literature indicating that physical and mental health problems experienced after birth negatively affect the breastfeeding self-efficacy of mothers (27,28). In studies conducted with small samples in Turkey, such a relationship was not found (40,41). It is recommended that healthcare professionals who support postnatal breastfeeding should identify the health problems experienced by the mother and help to overcome them (29).

Breastfeeding training is recommended to mothers during the antenatal care service (6). It is stated that the breastfeeding training given by the healthcare professionals who provide antenatal services is effective in both increasing the success of breastfeeding and increasing the rate of starting breastfeeding early (6,8,25). Breastfeeding counseling service is compulsory in Turkey according to the prenatal service protocol. In our study, it was observed that the breastfeeding success of the mothers who received prenatal care during their pregnancy was higher. The provision of this service can explain this result. Similar to our results, the study by Mızrak et al. found that the intervention group who received breastfeeding training in the prenatal period had higher breastfeeding success (26). Alternatively, there are also studies in the literature that are inconsistent with our findings (10,13). The role of healthcare professionals who provide breastfeeding counseling is critical in increasing breastfeeding success (29).

The support of spouses and social environment plays an important role in increasing the mother's breastfeeding success and self-efficacy. Spousal support is also important to easily overcome the difficulties of the postpartum period and to adapt to psychological and physiological changes due to hormonal imbalances of mothers (19). In our study, there was no significant relationship between the mothers' familial characteristics and the LATCH score means, but a significant relationship was found between familial characteristics and the mean BSES scores. The breastfeeding selfefficacy of mothers who had a positive relationship with their spouse, a positive relationship with their family, a positive relationship with the family of their spouse, who were satisfied with their marriage, who received adequate support from their spouse regarding baby care, and who thought that baby care was easy

were higher. In Turkish culture, in addition to the support received from the spouse, help and support are also received from the family of the mother or the family of the spouse. Social support in the postpartum period includes support for baby care, help with housework, and emotional support provided to the mother by her immediate surroundings. In this period, the woman especially expects spousal support and meeting this support at a sufficient level has a positive effect on the physical and mental well-being. Therefore, the mother feels that she is not alone, and her self-confidence increases (19,20,27).

Adaptation to motherhood and a sense of selfefficacy in baby care are related to the support of the spouse as well as many other factors. Mothers who are supported by their husbands and close relatives have a more comfortable early postpartum period (19). In a study conducted in Canada, it was observed that mothers 'perceptions of their spouses' sensitivities about baby care were effective in increasing their self-confidence and breastfeeding durations (20). In a study conducted in China, it was stated that while breastfeeding problems experienced by mothers after childbirth negatively affect the self-efficacy perception, a positive attitude toward breastfeeding by the primary caregiver increases the mother's self-efficacy perception and breastfeeding success (28). It has been emphasized especially for primiparous mothers that more effort should be given to breastfeeding training and that people who give primary care to the mother should be included in training (28). The number of studies on spousal and social support in the postpartum period in Turkey is limited (21-23). Aydın Özkan et al. found that mothers who received help in baby care in the first month of postpartum had higher breastfeeding self-efficacy (21). Cinar et al. investigated the relationship between the multidimensionally perceived social support and breastfeeding self-efficacy of mothers in the postpartum the first and second months and found a positive correlation between the presence of social support and breastfeeding self-efficacy (22). In a study conducted in the early postpartum period, it was shown that the perception of breastfeeding self-efficacy increased as the perception of emotional, social, and physical support of mothers from their spouses increased (23). According to the limited number of studies in Turkey and our findings, it is recommended that healthcare professionals providing antenatal and postnatal care should evaluate the family together during the follow-up process of the mothers. Training can be given to ensure that fathers and their immediate surroundings participate in this process. Providing effective breastfeeding support and a coordinated teamwork approach that responds to the mother's needs can increase the breastfeeding self-efficacy. Facing the needs of the baby and her own needs following the birth may lead to more desperation for the mother. Therefore, it is important to meet the needs of the postpartum period.

In the literature, it has been emphasized that the high level of breastfeeding self-efficacy is critical in maintaining breastfeeding behavior (8,15). The mother's belief and perception as well as her experience in breastfeeding can affect breastfeeding success (29). Maternal breastfeeding self-efficacy reflects the mother's self-confidence in breastfeeding (8). In our study, it was found that as the breastfeeding self-efficacy perception level of mothers increased, the LATCH breastfeeding success score also increased. In a critical review, breastfeeding self-efficacy measurement is recommended to better understand the reasons for low breastfeeding rates and the effects of the attempts on breastfeeding success (15).

Breastfeeding self-efficacy is the most powerful modifiable factor that can increase breastfeeding rates (8,9). In a systematic review and meta-analysis conducted by Galipeau et al., it was stated that high breastfeeding self-efficacy decreased the perception of breast milk deficiency and increased the probability of breastfeeding for a longer time (9). In interventional and cohort studies, it was shown that women with higher breastfeeding self-efficacy had increased breastfeeding success and achieved better breastfeeding results (8,11,12,27,42). As a result of the meta-analysis of randomized controlled trials, it was revealed that counseling and training interventions significantly increased the breastfeeding self-efficacy of the mother during the first 4-6 weeks. Breastfeeding success is also positively affected by this increase (9). As in other countries, the results of studies in Turkey are consistent with the results of our studies (13,14,24). These results confirm the positive relationship between the

mother's self-efficacy perception and breastfeeding success. Breastfeeding training can be given to pregnant women and supporters during the antenatal period by healthcare professionals (29). Supporting mothers in breastfeeding can also increase their breastfeeding success by increasing their self-efficacy.

The limitations of this study are as follows: i. Conducting the study in a single hospital and the small sample size may affect the generalizability of the findings. ii. BSES and LATCH levels were measured once in the study. Measurements to be made in the latter days of the breastfeeding process may give different results. iii. In order not to increase the time that the mother devotes, social support status could not be determined by scales, but evaluated with a small number of questions. On the other hand, the most strength of this study is that it is the first of its kind in Turkey in terms of investigating the relationship between breastfeeding self-efficacy perception and success with the factors such as a positive relationship with mother's family, spouse's family, spousal support, and stress.

In conclusion, the BSES and LATCH scores of primiparous mothers were found to be lower in this study. Breastfeeding success scores of mothers who received antenatal care and those without postnatal health problems were higher. Breastfeeding success was higher in mothers who received prenatal care during pregnancy and those without postnatal health problems. The BSES score of mothers without any health problems after birth was higher. The BSES scores of mothers who had a good family relationship, sufficient spousal support, and who were not stressed were higher. It was found that the higher the mothers' breastfeeding self-efficacy perception level was, the higher the breastfeeding success became.

In an increasing breastfeeding success of mothers, it may be useful to consider factors such as breastfeeding experience, prenatal care and postnatal health problems, psychological problems, and lack of family and spousal support. It is recommended that nurses/ midwives/healthcare professionals should take initiatives to increase the self-efficacy levels of mothers (pregnancy process, birth and postpartum training, encouragement about breastfeeding, dealing with breastfeeding problems) to increase breastfeeding success. Spouse and caregiver relatives can also participate in this training. The results of this study can shed light on issues such as determining breastfeeding problems and planning breastfeeding training for healthcare professionals and researchers.

**Funding Information:** This study was supported by Research Fund of the Balikesir University. Project Number: BAP 2020/006.

**Conflict of Interest:** The authors declare that they have no conflict of interest.

**Informed consent:** An informed consent was obtained from all individual participants included in the study.

# References

- 1. World Health Organization. Breastfeeding. https://www. who.int/health-topics/breastfeeding#tab=tab\_1 (accessed 14 Mar 2021).
- 2. The United Nations Children's Fund (UNICEF). Improving breastfeeding, complementary foods and feeding practices. https://www.unicef.org/nutrition/index\_breastfeeding.html (accessed 14 Mar 2021).
- 3. Schafer R, Genna CW. Physiologic breastfeeding: A Contemporary approach to breastfeeding initiation. J Midwifery Womens Health 2015; 60: 546-53.
- Bellù R, Condò M. Breastfeeding promotion: evidence and problems. Pediatr Med Chir 2017; 39:156.
- Victora CG, Bahl R, Barros AJ, França GV, Horton S, Krasevec J, et al. Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. Lancet 2016; 387: 475-90.
- 6. World Health Organization & The United Nations Children's Fund. Implementation guidance: protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services the revised Baby-friendly Hospital Initiative. https://apps.who.int/iris/bitstream/han dle/10665/272943/9789241513807eng.pdf?ua=1 (accessed 14 Mar 2021).
- Hacettepe University Institute of Population Studies. 2018 Turkey Demographic and Health Survey. Ankara: Hacettepe University Institute of Population Studies, T.R. Presidency of Turkey Directorate of Strategy and Budget and TÜBİTAK; 2019. http://www.hips.hacettepe.edu.tr/eng/tdhs2018/ TDHS\_2018\_main\_report.pdf (accessed 14 Mar 2021).
- Brockway M, Benzies K, Hayden KA. Interventions to improve breastfeeding self-efficacy and resultant breastfeeding rates: a systematic review and meta-analysis. J Hum Lact 2017; 33: 486-99.

- 9. Galipeau R, Baillot A, Trottier A, Lemire L. Effectiveness of interventions on breastfeeding self-efficacy and perceived insufficient milk supply: a systematic review and meta-analysis. Matern Child Nutr 2018; 14: e12607.
- Tornese G, Ronfani L, Pavan C, Demarini S, Monasta L, Davanzo R. Does the LATCH score assessed in the first 24 hours after delivery predict non-exclusive breastfeeding at hospital discharge? Breastfeed Med 2012; 7: 423-30.
- Kronborg H, Foverskov E, Væth M, Maimburg RD. The role of intention and self-efficacy on the association between breastfeeding of first and second child, a Danish cohort study. BMC Pregnancy Childbirth 2018; 18: 454.
- 12. O'Sullivan EJ, Alberdi G, Scully H, Kelly N, Kincaid R, Murtagh R, et al. Antenatal breastfeeding self-efficacy and breastfeeding outcomes among mothers participating in a feasibility breastfeeding-support intervention. Ir J Med Sci 2019;.188: 569-78.
- Gerçek E, Sarıkaya Karabudak S, Ardıç Çelik N, Saruhan A. The relationship between breastfeeding self-efficacy and LATCH scores and affecting factors. J Clin Nurs. 2017; 26: 994-1004.
- 14. Yenal K, Aluş Tokat M, Durgun Ozan Y, Çeçe Ö, Bakılan Abalın F. The relation between breastfeeding self-efficacy and breastfeeding success in mothers. Journal of Research and Development in Nursing 2013; 10: 14-19.
- Tuthill EL, McGrath JM, Graber M, Cusson RM, Young SL. Breastfeeding self-efficacy: a critical review of available instruments. J Hum Lact 2016; 32: 35-45.
- 16. Altuntas N, Turkyilmaz C, Yildiz H, Kulali F, Hirfanoglu I, Onal E, et al. Validity and reliability of the infant breast-feeding assessment tool, the mother-baby assessment tool, and the LATCH scoring system. Breastfeed Med 2014; 4: 191-95.
- Dennis CL, Faux S. Development and psychometric testing of the Breastfeeding Self-Efficacy Scale. Res Nurs Health 1999; 22: 399-409.
- 18. Ogbo FA, Akombi BJ, Ahmed KY, Rwabilimbo AG, Ogbo AO, Uwaibi NE, et al. Breastfeeding in the community-how can partners/fathers help? A systematic review. Int J Environ Res Public Health 2020; 17: 413.
- 19. Aguiar C, Jennings L. Impact of male partner antenatal accompaniment on perinatal health outcomes in developing countries: a systematic literature review. Matern Child Health J 2015; 19: 2012–19.
- Rempel LA, Rempel JK, Moore KCJ. Relationships between types of father breastfeeding support and breastfeeding outcomes. Matern Child Nutr 2017; 13: e12337.
- 21. Aydın Özkan S, Bozkurt AM, Korkmaz B, Yılmaz G, imşek Küçükkelepce D. The relationship between depression and breastfeeding self-efficacy in the first month of postpartum. Journal of Hacettepe University Faculty of Nursing 2019; 6: 28-35.
- Cinar N, Köse D, Altinkaynak S. The relationship between maternal attachment, perceived social support and breastfeeding sufficiency. J Coll Physicians Surg Pak 2015; 25: 271-75.

- Uludağ E, Öztürk S. The effect of partner support on selfefficiency in breastfeeding in the early postpartum period. Am J Fam Ther 2020; 48: 211-19.
- 24. Kılcı H, Çoban A. The correlation between breastfeeding success in the early postpartum period and the perception of self-efficacy in breastfeeding and breast problems in the late postpartum. Breastfeed Med 2016; 11: 188-95.
- Göl İ. Antenatal Care and Breastfeeding. TJFMPC 2018; 12: 102-108.
- Mızrak B. Ozerdogan N, Colak E, The Effect of Antenatal Education on Breastfeeding Self-Efficacy: Primiparous Women in Turkey. Int. J of Caring Sciences 2017; 10: 503-10.
- Ngo LTH, Chou HF, Gau ML, Liu CY. Breastfeeding self-efficacy and related factors in postpartum Vietnamese women. Midwifery 2019; 70: 84-91.
- 28. Li T, Guo N, Jiang H, Eldadah M. Breastfeeding self-efficacy among parturient women in Shanghai: a cross-sectional study. J Hum Lact 2019; 35: 583-91.
- 29. Robinson BA, Hartrick Doane G. Beyond the latch: A new approach to breastfeeding. Nurse Educ Pract 2017; 26: 115-17.
- Dennis CL. The breastfeeding self-efficacy scale: psychometric assessment of the short form. J Obstet Gynecol Neonatal Nurs 2003; 32: 734-44.
- Aluş Tokat M, Okumuş H, Dennis CL. Translation and psychometric assessment of the Breast-feeding Self-Efficacy Scale-Short Form among pregnant and postnatal women in Turkey. Midwifery 2010; 26: 101-108.
- Yenal K, Okumuş H. Reliability of LATCH breastfeeding assessment tool. Journal of Research and Development in Nursing 2003; 5: 38-44.
- 33. Jensen D, Wallace S, Kelsay P. LATCH: a breastfeeding charting system and documentation tool. J Obstet Gynecol Neonatal Nurs 1994; 23: 27-32.
- Adams D, Hewell S. Maternal and professional assessment of breastfeeding. J Hum Lact 1997; 13: 279-83.
- Hankel MA, Kunseler FC, Oosterman M. Early breastfeeding experiences predict maternal self-efficacy during the transition to parenthood. Breastfeed Med 2019; 14: 568-74.
- 36. Lau CYK, Lok KYW, Tarrant M. Breastfeeding duration and the theory of planned behavior and breastfeeding selfefficacy framework: a systematic review of observational studies. Matern Child Health J 2018; 22: 327-42.
- Karakoyunlu Ö, Ejder Alpay S, Gürol A. The effect of pain, stress, and cortisol during labor on breastfeeding success. Dev Psychobiol. 2019; 61: 979-87.
- 38. Özkan H, Üst ZD, Gündoğdu G, Çapık A, Ağapınar ahin S. The relationship between breast feeding and depression in the early postpartum period. Med Bull Sisli Etfal Hosp 2014; 48: 124-231.
- 39. Sowjanya SVNS, Venugopalan L. LATCH score as a predictor of exclusive breastfeeding at 6 weeks postpartum: a prospective cohort study. Breastfeed Med 2018; 13: 444-49.
- Aslan Y, Ege E. Breastfeeding self-efficacy of mothers and relationship with depression risk. Journal of Human Sciences 2016; 13: 3160-72.

- 41. Fata S, Atan SU. The relationship between fatigue and breastfeeding self-efficacy. Niger J Clin Pract 2018; 21: 1408-14.
- 42. Vieira ES, Caldeira NT, Eugênio DS, Lucca MMD, Silva IA. Breastfeeding self-efficacy and postpartum depression: a cohort study. Rev Lat Am Enfermagem 2018; 26: e3035.
- 43. Schafer R, Genna CW. Physiologic breastfeeding: a contemporary approach to breastfeeding initiation. J Midwifery Womens Health 2015; 60: 546-53.

# Correspondence

Ayla Acikgoz Address: Vocational School of Health Services, Dokuz Eylul University, Izmir, Turkey. Telephone: +90 (232) 4124738 Fax: +90 (232) 277 07 39 E-mail: ayla.acikgoz@deu.edu.tr