Research Article *Araştırma Makalesi* DOI: 10.62425/esbder.1491954

Predictors of Breastfeeding Success in Postpartum Period: Delivery Type, Postpartum Support, and Postpartum Depression

Postpartum Dönemde Emzirme Başarısının Belirleyicileri: Doğum Şekli, Postpartum Destek ve Postpartum Depresyon

Ayşegül KILIÇLI[1]
[1]Muş Alparslan University, Faculty of Health Sciences, Department of Nursing, Mus, Türkiye

Sidar GÜL[2]
[2]Siirt University, Faculty of Health Sciences, Department of Midwifery, Siirt, Türkiye

ABSTRACT

Objective: This study aimed to investigate the association between delivery type, postpartum support need and postpartum depression on breastfeeding success in the first postpartum month.

Methods: This study, conducted between August 8, 2022 and August 31, 2023, was comparative, prospective and cross-sectional. Sample consisted of 300 women (150 vaginal, 150 cesarean section). Data were collected using Descriptive Information Form, Postpartum Support Questionnaire, Edinburgh Postpartum Depression Scale, and Bristol Breastfeeding Assessment Tool. Multiple linear regression was used to identify the predictors of breastfeeding success.

Results: Those who did not received sufficient support rate was 50.7%, the presence of postpartum depression was 54.0%, and the mean breastfeeding success score was 6.4±0.9 which was moderate. Cesarean delivery (β=-0.149, *p*<.01), increased need for postpartum support (β=-0.203, *p*<.01) and postpartum depression (β=0.261, *p*<.01) were significant predictors which were explaining 21.0% of total variance in breastfeeding success. The breastfeeding success of cesarean section mothers who did not have postpartum depression but received inadequate support decreased by 20.3% compared to vaginal birth mothers. Mothers who gave birth by caesarean section, did not receive postpartum support and were at risk of postpartum depression had the lowest breastfeeding success.

Conclusion: Cesarean section, postpartum support, and postpartum depression are factors that significantly affect breastfeeding success. Therefore, breastfeeding counselling services for mothers in the postpartum care process should be planned and implemented individually to address mode of delivery, need for postpartum support and postpartum depression.

Keywords: Birth type, depression, lactation, postpartum, support

ÖZ

Amaç: Bu çalışmanın amacı doğum sonrası birinci ayda doğum şekli, doğum sonrası destek ihtiyacı ve doğum sonrası depresyonun doğum sonrası emzirme başarısı üzerine etkisini araştırmaktır.

Yöntemler: 8 Ağustos 2022 ve 31 Ağustos 2023 tarihleri arasında yürütülen bu çalışma karşılaştırmalı, prospektif ve kesitseldir. Örneklem 300 kadından (150 vajinal, 150 sezaryen) oluşmaktadır. Veriler Tanımlayıcı Bilgi Formu, Doğum Sonrası Destek Anketi, Edinburgh Doğum Sonrası Depresyon Ölçeği ve Bristol Emzirme Değerlendirme Aracı kullanılarak toplanmıştır. Emzirme başarısının belirleyicilerini tanımlamak için çoklu doğrusal regresyon kullanılmıştır.

Bulgular: Yeterli destek almayanların oranı %50.7, postpartum depresyon varlığı %54.0 ve ortalama emzirme başarı puanı 6.4±0.9 olup orta düzeydedir. Sezaryen doğum (β=-0.149, *p*<.01), doğum sonrası destek ihtiyacının artması (β=-0.203, *p*<.01) ve doğum sonrası depresyon (β=0.261, *p*<.01) emzirme başarısındaki toplam varyansın %21.0'ini açıklayan anlamlı yordayıcılardır. Doğum sonrası depresyonu olmayan ancak yetersiz destek alan sezaryen annelerinin emzirme başarısı, vajinal doğum yapan annelere kıyasla %20.3 oranında azalmıştır. Sezaryenle doğum yapan, doğum sonrası destek almayan ve doğum sonrası depresyon riski taşıyan anneler en düşük emzirme başarısına sahip olmuştur.

Sonuç: Sezaryenle doğum, doğum sonrası destek ve doğum sonrası depresyon emzirme başarısını önemli ölçüde etkileyen faktörlerdir. Bu nedenle doğum sonrası bakım sürecinde annelere yönelik emzirme danışmanlığı hizmetleri, doğum şekli, doğum sonrası destek ihtiyacı ve doğum sonrası depresyonu ele alacak şekilde bireysel olarak planlanmalı ve uygulanmalıdır.

Anahtar Kelimeler: Doğum şekli, depresyon, laktasyon, doğum sonrası, destek

Geliş Tarihi/Received 29.05.2024
Kabul Tarihi/Accepted 30.10.2024
Yayın Tarihi/Publication Date 23.12.2024

Sorumlu Yazar/Corresponding author: Ayşegül KILIÇLI
E-mail: aysegul_ay_9@hotmail.com
Cite this article: Kılıçlı, A., & Gül, S. (2024). Predictors of Breastfeeding Success in Postpartum Period: Delivery Type, Postpartum Support, and Postpartum Depression. *Journal of Midwifery and Health Sciences, 7*(4), 625-638.

Content of this journal is licensed under a Creative Commons Attribution-Noncommercial 4.0 International License.

Introduction

Breastfeeding offers excellent nutrition for infants and promotes maternal health after delivery (Said-Mohamed et al., 2018). The World Health Organization strongly recommends that infants should be exclusively breastfed by the end of the sixth month after birth (WHO, 2003). In the long term, exclusively breastfeeding practices also contribute positively to global productivity and environmental sustainability. Therefore, protecting, promoting and sustaining breastfeeding is crucial to achieving the Sustainable Development Goals by 2030 (Kartal & Gürsoy, 2020). However, the rate of exclusive breastfeeding among babies aged 0-6 months is 44% worldwide (UNICEF, 2021). Despite the fact that breastfeeding is a widespread practice throughout Türkiye, only 41% of babies are breastfed for the first six months after birth and the average duration of exclusive human milk nutrition is only 1.8 months (THDS, 2018). In addition, the rate of exclusive breastfeeding decreases with the age of the baby. These rates show that breastfeeding success is not at the desired level (TDHS, 2018).

Although the postpartum process is mainly influenced by the sociodemographic characteristics of the mother such as age, education level and income, these are individual factors that are difficult to change and these factors affect all life periods of women (Yang et al., 2023). However, every woman of childbearing age can experience the postpartum period. Moreover, mode of delivery, postpartum support and postpartum depression are concepts specific to the peripartum and postpartum period and affect all family members (Buran et al., 2022; Mikšić et al., 2020; Maleki-Saghooni et al., 2020; Nilsson et al., 2020; Vieira et al., 2018). In terms of mode of delivery, the process after caesarean section involves more risk than the process after vaginal delivery. Because in the early period, pain at the incision site due to the operation, headache, late onset of breast milk secretion, delay in mobilisation, bleeding and infection risk are higher, while in the late period, delay in wound healing, difficulty in the mother's care of herself and her baby, head, neck and breast pain, Postpartum symptoms such as difficulty in mobilisation due to caesarean section and difficulty in breastfeeding the baby in the correct breastfeeding position, difficulty in breastfeeding and care of the baby, sleep problems and fatigue due to frequent breastfeeding during the day and night are experienced more frequently by mothers compared to vaginal delivery (Yang et al., 2023; Balcı Yangın et al., 2021; Buran et al., 2022). Postpartum support is essential for maintaining the health of the mother and the baby, for the mother to provide care for herself and her baby, for the baby to be exclusively breastfed and for the mother to maintain the breastfeeding process effectively (Awaliyah et al., 2019; Mikšić et al., 2020; Buran et al., 2022). This support can be provided by the spouse, family, friends or health professionals. Inadequate provision of support, moreover, providing the support perceived and needed by the mother herself is a very important factor for the successful continuity of the postpartum process in general and breastfeeding in particular (Awaliyah et al., 2019; Mikšić et al., 2020; Maleki-Saghooni et al., 2020; Nilsson et al., 2020). In the literature, it is stated that mothers who receive adequate support in the postpartum process have a more successful breastfeeding process and mothers have a higher ability to cope with the postpartum process (Mikšić et al., 2020; Maleki-Saghooni et al., 2020; Nilsson et al., 2020). Postpartum depression is a process in which the mother cannot cope with the postpartum period well enough, the support she needs in the postpartum period is not provided adequately, she has difficulty in caring for herself and her baby, all of these are accompanied by postpartum physical and mental symptoms (such as pain, fatigue, insomnia, breastfeeding problems) and these problems continue to increase (Yang et al., 2023; Toledo et al., 2022; Xia et al., 2022; Mercan & Tari Selçuk, 2021; Mikšić et al., 2020; Maleki-Saghooni et al., 2020; Nilsson et al., 2020; Awaliyah et al., 2019). It also significantly affects breastfeeding success and is an important postpartum symptom that requires early intervention (Vieira et al., 2018; Mikšić et al., 2020; Mercan & Tari Selçuk, 2021; Toledo et al., 2022; Xia et al., 2022). Therefore, all these factors are modifiable factors that should be emphasised in the postpartum period and can be prevented when the risk is detected (Mikšić et al., 2020; Mercan & Tari Selçuk, 2021; Toledo et al., 2022; Xia et al., 2022).

As mentioned above in the literature, there are many factors affecting breastfeeding success. These factors include age, mode of delivery, education level, employment status, economic status, region of residence (rural/urban centre), breastfeeding knowledge, breastfeeding education during pregnancy, physical and mental health during breastfeeding, whether they receive support from their spouses, family elders and friends during breastfeeding, birth weight of the baby, first skin-to-skin contact after birth and duration of first breastfeeding, bottle use, continuing breastfeeding after returning to work and duration of breastfeeding while working, whether the mother had experience of stopping breastfeeding due to inappropriateness of breastfeeding in the community, beliefs, attitudes and behaviours towards breastfeeding (Yang et al., 2023; Balcı Yangın et al., 2021; Mercan & Tari Selçuk, 2021; Chen et al., 2020). Within these factors, delivery type is the most dominant factor influencing breastfeeding success. Studies have shown that

women who delivered by cesarean section start breastfeeding later than women who delivered vaginally (Awaliyah et al., 2019; Maleki-Saghooni et al., 2020; Mikšić et al., 2020; Nilsson et al., 2020; Buran et al., 2022) This has been linked to the anaesthesia, analgesia and level of discomfort experienced after the surgery. Therefore, it is stated that the success of breastfeeding is negatively affected (Awaliyah et al., 2019; Buran et al., 2022). The other factor is insufficient postpartum support from their close relatives (husband, mother, etc.) for breastfeeding. In reality, many women encounter challenges with breastfeeding. For the most of women, the practice of breastfeeding is not effortless or spontaneous. There is no doubt that breastfeeding practice is more difficult to achieve without support (Awaliyah et al., 2019; Mikšić et al., 2020; Buran et al., 2022). In addition, the physical, social and emotional changes that occur during the postpartum period also mean that mothers need support in many areas, such as rest, encouragement, individual self-care, baby care and adjusting to the role of motherhood (Maleki-Saghooni et al., 2020; Nilsson et al., 2020). The support provided during this period has a positive effect on the mother, facilitates the woman's adaptation to the feeling and role of motherhood, and ensures the successful continuation of breastfeeding. However, if the support is not adequate, the psychosocial status of the mother is negatively affected and as a result, postpartum depression (PPD), which is another important factor affecting breastfeeding failure, may occur (Vieira et al., 2018; Mikšić et al., 2020; Mercan & Tari Selçuk, 2021). In particular, it has been reported that mothers who are at risk for PPD have lower breastfeeding success (Toledo et al., 2022; Xia et al., 2022).

Breastfeeding problems usually emerge in the first month postpartum after delivery (Cooke et al., 2003; Mortazavi et al., 2015; de Senna et al., 2020). First month postpartum is a process of increased vulnerability to depressive mood changes due to sudden hormonal fluctuations, and when combined with the discomfort caused by the delivery type and insufficient support, breastfeeding success is dramatically affected. Therefore, an in-depth examination of these factors combination will help to plan more comprehensively and cost-effective breastfeeding counselling interventions to improve the breastfeeding success of lactating women (Awaliyah et al., 2019; Mikšić et al., 2020; Toledo et al., 2022). Although there are studies on breastfeeding success in the literature, compared to other studies, this study was conducted with prospective strategy in the first month of the postpartum period that should be handled in terms of breastfeeding success. Since breastfeeding success is influenced by many factors, this study used a multivariate analysis based on delivery type, postpartum support need, and PPD controlling for some sociodemographic variables (age, education, etc.) that may independently affect breastfeeding success. In addition, the effect of variables (postpartum support and PPD) on breastfeeding success was evaluated with unique measurement tools. In this direction, the present study aims to investigate the association between delivery type, postpartum support need, and presence of PPD symptoms on breastfeeding success in the first month of postpartum. In line with this aim, answers to the following specific questions were sought:

1. How do women experience postpartum support and PPD symptom?
2. What is the effect of delivery type, postpartum support and presence of PPD symptom on breastfeeding success?
3. Delivery type, postpartum support and PPD: How does the combination effect breastfeeding success?

Methods

Study type

This study was conducted with comparative, prospective and cross-sectional type.

Setting

The universe of the study consisted of mothers who gave birth in Muş State Hospital. This study was conducted between August 8, 2022 and August 31, 2023. All women who gave birth in the hospital on these determined dates, who were hospitalised in the Gynaecological Surgery Service due to labor, who met the inclusion criteria and who agreed to participate in the study were included. The hospital was a secondary care hospital with approximately 2000 annual births. In the hospital identified as Mother-Baby Friendly, there is a nurse as a breastfeeding counsellor.

Sample

In calculating the sample size of the study, difference analysis was used for the mean of two independent groups. It was determined that a minimum of 130 women should be included in each group for two independent groups in the sample size calculation made using the G Power 3.1 program with a power of 95%, taking type I error of 0.05 and the effect size of d=0.45 (Faul et al., 2007). In this study, all women who were hospitalized in the relevant period, accepted to participate in the study and met the inclusion criteria were interviewed, respectively. Participants were enrolled if they: (1) were between 18 and 49 years of age, (2) delivered a full-term singleton, (3) were planning to continue to live in the city where the study was conducted for at least 1 month (in order for researchers to reach the participants in accordance with the methodology of the

research), (4) were literate at least, and (5) participated in the study voluntarily. Participants were excluded from the study if they: (1) had intellectual challenges making it difficult to understand the data collection tools, (2) had a newborn who was preterm at birth, (3) had a newborn with a critical illness (such as cardiopulmonary or congenital anomaly, low birth weights), or (4) had experienced postpartum period complications. In the relevant period, six women who delivered vaginally, and one women who delivered by cesarean section did not want to participate in the study. The methodology used to select the sample is purposive sampling. Finally; sample of the study consisted of a total of 300 participants (vaginal delivery=150, cesarean section=150) (Figure 1).

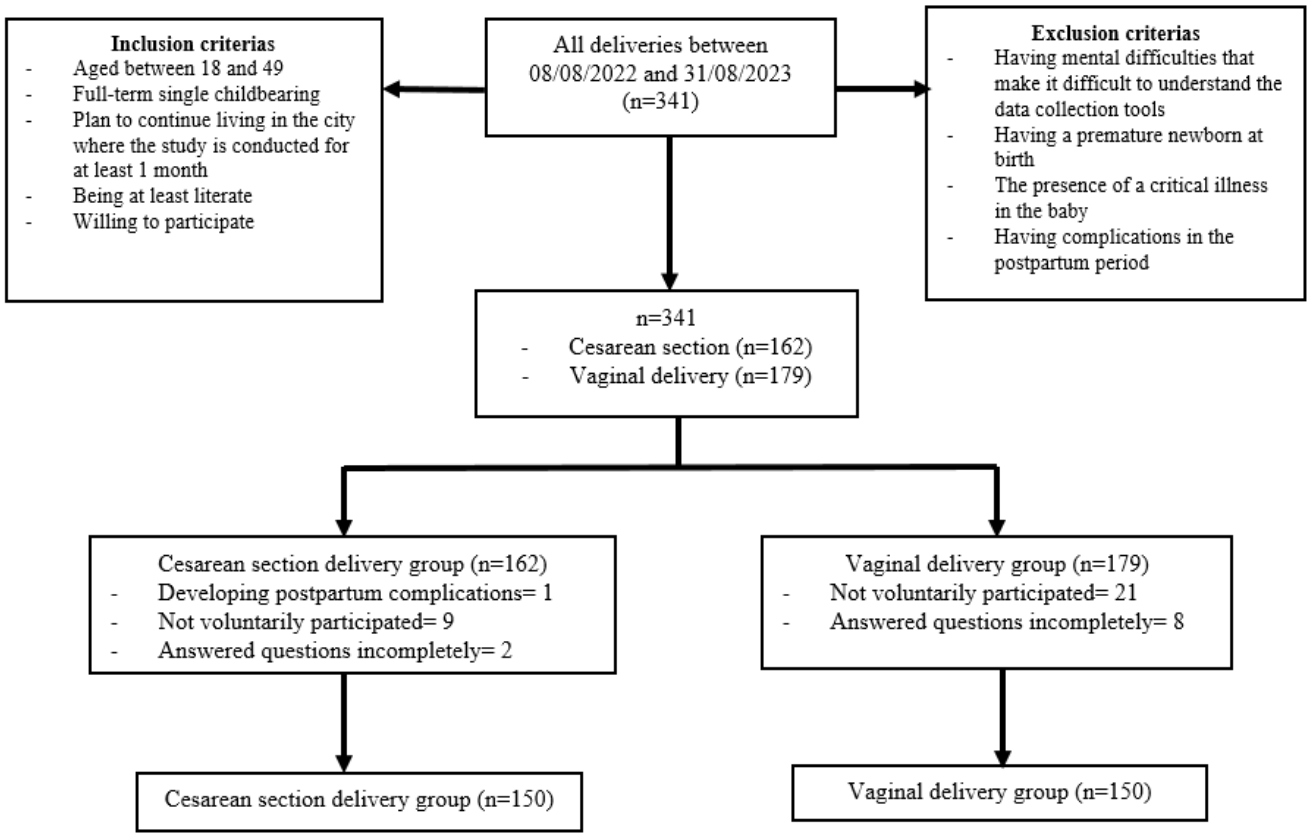

Figure 1. Study flow chart

Post hoc power analysis have determined an adequate sample size detect a moderate effect size (f^2=0.26) using multiple regression with four predictor variables (alpha=0.05, power=0.95) (Faul et al., 2007).

Data Collection Tools

Descriptive Information Form, Postpartum Support Questionnaire, Edinburgh Postpartum Depression Scale, and Bristol Breastfeeding Assessment Tool were used to collect data.

Descriptive Information Form

The descriptive information form developed by the researchers in line with the literature included 2 sections (Dolgun et al., 2018; Mercan & Tari Selçuk, 2021; Buran et al., 2022). The first section included 10 questions about the mother (age, educational status, employment status, income status, number of births, delivery type, etc.) and the second section included four questions about the baby (birth weight, height, apgar score and time of first breastfeeding).

Postpartum Support Questionnaire (PSQ)

PSQ was developed by Logsdon et al. (1996) and adapted into Turkish by Ertürk (2007). It is usually used between the fourth and eighth weeks postpartum and consists of two parts (need for support and received support). This Likert-type scale consists of 34 items. The total point of the items asked separately for both sections is obtained. The higher the overall point, the greater the importance of the need for support and the greater the support received. Both parts of the scale consist of four sub-dimensions (financial,

emotional, information and comparison). The minimum point that can be obtained in both parts of the score is zero and the maximum point is 238. The total point obtained in support need section is '≤130 points: support need no important', '>130 points: support need important'. The total point obtained in received support section is '≤99 points: no support', '>99 points: there is support'. Cronbach's alpha value of the scale is 0.88 for support need section and 0.95 for received support section (Ertürk, 2007). In this study, it was determined 0.94 for the support need and 0.96 for received support.

Edinburgh Postpartum Depression Scale (EPDS)

The developed scale by Cox et al. (1987) was later adapted to Turkish by Engindeniz et al. (1997). The scale is a four Likert type scale composed of 10 items. A point minimum of zero and a maximum of 30 points can be calculated from the scale. The scale's cut-off point is 13 and above for depression in an individual, and above this point indicates the presence of PPD symptoms. Cronbach's α value was found to be 0.79 by Engindeniz et al (1997). In this study Cronbach's α value was found 0.63.

Bristol Breastfeeding Assessment Tool (BBAT)

The scale, originally developed by Ingram et al. (2015) and later adapted into Turkish by Dolgun et al. (2018), is a Likert-type scale and consists of four items (Ingram et al., 2015; Dolgun et al., 2018). The items are "positioning", "holding", "sucking", and "swallowing". During the implementation of the scale, the mother is observed by a health professional while she is breastfeeding. A minimum total point score of zero and a maximum total point score of eight can be calculated from the total of the items. Cronbach α value was found to be 0.77 by Dolgun et al. (2017). In this study, Cronbach α value was found to be 0.55.

Data Collection

This present study was conducted between August 8, 2022 and August 31, 2023 in the Gynecology and Obstetrics Department of Muş State Hospital. The mothers who had a delivery in the hospital and who were hospitalized in the Obstetrics and Gynecology Service were interviewed directly during the postpartum period within the following 24 hours, and the mothers were informed about the study. Initially, the researchers informed the mothers that the mothers who participated in the study would be interviewed again at the end of the first month after delivery, and the address and contact information of the mothers were obtained. Afterwards, the participants filled the Descriptive Information Form by themselves. The data about the baby's height, weight, and Apgar score were obtained from the files of the participants. At the end of the first month after delivery, the mothers were visited at their homes. Participants filled the PSQ, and EPDS by themselves. Finally, the researchers collected data for the BBAT by observing the mothers' breastfeeding behaviors. The participants took an average of 10-15 minutes to complete the Descriptive Information Form, an average of 20 minutes to complete the PSQ and EPDS, and an average of 15 minutes for the researchers to observe the participants' breastfeeding behaviors.

Statistical Analysis

SPSS 26.0 (IBM SPSS Statistics Version 26, SPSS Inc., Chicago, Illinois, USA, 2019) package program was used to analyze the data. In the analysis of continuous variables, the Kolmogorov-Smirnov test was performed to assess the normality of the data. The number, percentage, mean, and standard deviation (±) values were calculated for descriptive statistics. Independent samples t-test was performed for differences between two means. Chi-square was used for categorical variables. In the scope of advanced analysis, a multiple linear regression model was followed using the enter method to determine the effect of delivery type (cesarean), PSQ support (need and received), and EPDS on BBAT. ANOVA analysis (Linear Regression Model Univariate Analysis Multiple Group Comparisons) was used to investigate the effect of delivery type, support receive status and PPD status on breastfeeding success. The statistically accepted significance of the study was $p<0.05$ with a 95% confidence interval.

Ethics Approval

This study was conducted in accordance with the guidelines set out in the Declaration of Helsinki. Ethical approval was obtained from the Muş Alparslan University Ethics Committee for Scientific Research and Publication to conduct the study (Date: 01.07.2022, No:9/54), institutional permission from Muş Provincial Health Directorate (Date: 08.08.2022, No: E-35465298-619), and the participants' signed informed consent was obtained.

Results

Sample Characteristics

Cesarean section and vaginal delivery groups were found to be similar in terms of socio-demographic characteristics (maternal age, family type, education, income, employment, social security, parity, baby's gender, height and weight) ($p>.05$). However, these two groups differed in terms of Apgar score and time of first breastfeeding ($p\leq.01$; Table 1).

Table 1.
Comparison of the Sociodemographic Characteristics of the Participants Who Delivered by Cesarean Section and Vaginally

Sociodemographic characteristics (n=300)	Total (n=300) n (%)	CS (n=150) n (%)	VD (n=150) n (%)	X^2 test and *p*
Family type				
Nuclear	216 (72.0)	105 (70.0)	111 (74.0)	χ^2=0.595
Extended	84 (28.0)	45 (30.0)	39 (26.0)	*p*=.413
Education				
Primary and below	144 (48.0)	79 (52.7)	65 (43.3)	χ^2=3.275
Middle	89 (29.7)	38 (25.3)	51 (34.0)	*p*=.194
High and above	67 (22.3)	33 (22.0)	34 (22.7)	
Income				
Income<Expense	84 (28.3)	50 (33.3)	35 (23.3)	χ^2=3.694
Income=Expense	200 (66.7)	93 (62.0)	107 (71.3)	*p*=.158
Income>Expense	15(5.0)	7 (4.7)	8 (5.3)	
Employment				
Yes	23 (7.7)	11 (7.3)	12 (8.0)	χ^2=0.047
No	277 (92.3)	139 (92.7)	138 (92.0)	*p*=.828
Social security				
Yes	178 (59.3)	87 (58.0)	91 (60.7)	χ^2=0.221
No	122 (40.7)	63 (42.0)	59 (39.3)	*p*=.638
Parity				
Primiparous	113 (37.7)	59 (39.3)	54 (36.0)	χ^2=0.355
Multiparous	187(62.3)	91 (60.7)	96 (64.0)	*p*=.551
Baby's gender				
Female	155 (51.7)	72 (48.0)	83 (55.3)	χ^2=1.615
Male	145 (48.3)	78 (52.0)	67 (44.7)	*p*=.204
For women whose last pregnancy was a caesarean section; reason for caesarean section				
Elective	31 (20.7)	31 (20.7)		
Fetal distress	85 (56.7)	85 (56.7)		
Breech presentation	18 (12.0)	18 (12.0)		
Oligohydramnios	7 (4.7)	7 (4.7)		
Other*	9 (5.9)	9 (5.9)		
	x̄±SD	**x̄±SD**	**x̄±SD**	**t test and p**
Maternal age	27.80±6.08	28.39±6.51	27.21±5.57	t=-1.686, *p*=.093
Baby's birth height (cm)	50.5±1.11	50.4±1.12	50.6±1.11	t=1.550, *p*=.122
Baby's birth weight (gr)	3153±273.6	3160.9±269.4	3145.6±278.5	t=-0.484, *p*=.629
Apgar score (5. min)	9.24±0.67	9.10±0.67	9.38±0.65	t=3.645, ***p*≤.001**
Time of first breastfeeding (min)	77.43±54.2	127.36±28.15	27.50±9.63	t=-41.098, ***p*≤.001**

*Other: Premature membrane rupture(n=3), cord prolapse(n=1), myomectomy(n=2), macrosomia(n=3), CS: Cesarean section , VD: Vaginal delivery, Min: minute, t: Independent Sample t Test, χ^2: Chi-square Test

PSQ, EPDS, and BBAT Scores of the Participants and Comparison According to Delivery Type

The mean score of PSQ support need was 179.2±36.2, the mean score of PSQ received support was 97.8±44.5, the mean score of EPDS was 12.7±3.9, and the mean score of BBAT was 6.4±0.9. The mean scores of PSQ support need, financial, emotional and information sub-dimensions, and EPDS were higher in cesarean section group compared to vaginal delivery group (*p*<.05). The mean scores of PSQ received support, financial and emotional sub-dimensions, and BBAT were lower in cesarean section group compared to vaginal delivery group (*p*<.05). The prevalence of

insufficient postpartum support was 50.7% (53.3% cesarean section, 58.0% vaginal delivery), the presence of PPD symptoms was 54.0% (65.3% cesarean section, 42.7% vaginal delivery) (Table 2).

Table 2.
Comparison of EPDS, BBAT, PSQ, and Sub-Dimension Scores of the Participants Who Delivered by Cesarean Section and Vaginally

Scale and sub-dimensions	Total (n=300)			CS (n=150)	VD (n=150)	Test and p
	Min	Max	x̄±SD	x̄±SD	x̄±SD	
PSQ support need	79	238	179.2±36.2	185.4±34.9	173.0±36.5	t=-3.014, ***p*=.003**
Financial	22	63	49.0±9.8	50.8 ±9.4	47.2±9.9	t=-3.255 ***p*=.001**
Emotional	20	70	52.6±11.2	54.3±9.8	50.8±12.2	t=-2.672 ***p*=.008**
Information	7	70	52.5±13.2	54.5±13.1	50.5±12.9	t=-2.693 ***p*=.007**
Compare	0	35	25.0±6.0	25.6±6.9	24.4±6.8	t=-1.612 *p*=.108
PSQ received support	12	214	97.8±44.5	91.3±40.2	104.4±47.7	t=2.554 ***p*=.01**
Financial	0	57	23.1±11.8	20.5±9.6	25.7±13.3	t=3.822 ***p*≤.001**
Emotional	2	64	28.8±14.2	26.7±13.1	30.9±15.0	t=2.551 ***p*=.011**
Information	2	65	29.8±14.2	28.3±13.5	31.2±14.8	t=1.756 *p*=.080
Compare	0	35	16.0±8.0	15.6±8.0	16.5±8.0	t=0.910 *p*=.364
EPDS	0	24	12.7±3.9	13.6±2.1	11.9±5.0	t=-3.884 ***p*≤.001**
BBAT	5	8	6.4±0.9	6.2±0.7	6.6±1.0	t=4.588 ***p*≤.001**
	n (%)			n (%)	n (%)	χ^2 test and *p*
Support need						
Important	264 (88.0)			134 (89.3)	130 (86.7)	χ^2=0.505 *p*=.477
No important	36 (12.0)			16 (10.7)	20 (13.3)	
Received postpartum support						
Insufficient	152 (50.7)			80 (53.3)	72 (48.0)	χ^2=0.853 *p*=.356
Sufficient	148 (49.3)			70 (46.7)	78 (52.0)	
Presence of PPD symptoms						
Yes	162 (54.0)			98 (65.3)	64 (42.7)	χ^2=15.513 ***p*≤.001**
No	138 (46.0)			52 (34.7)	86 (57.3)	

CS: Cesarean section, VD: Vaginal delivery, PSQ: Postpartum Support Questionnaire, EPDS: Edinburgh Postpartum Depression Scale, BBAT: Bristol Breastfeeding Assessment Tool, PPD: Postpartum depression, t: Independent Sample t Test, χ^2: Chi-square Test

Breastfeeding success was increased by 0.17 points with a one-point increase in the PSQ received support. Breastfeeding success was reduced by 0.26 points with a one-point increase in EPDS. These variables were found to be significant predictors explaining 21.0% of the total variance in breastfeeding success (R=0.458, R^2=0.210, Adjusted R^2=0.199, *p*≤.001) (Table 3).

ANOVA analysis was performed to determine the effects of prevalence of PPD symptoms, postpartum received support, and delivery type on the mean score of BBAT. In multiple group comparisons, the mean score of BBAT was 20.3% lower in women who did not have PPD symptoms, who did not receive postpartum support, and who delivered by cesarean section according to women who delivered vaginally (F=15.009, *p*≤.01, η2=0.203). Also, in mothers who delivered by cesarean section, did not receive postpartum support and had PPD symptoms, breastfeeding success was lowest; but in mothers who delivered vaginally, received support and did not have PPD symptoms, breastfeeding success was highest (Table 4).

Table 3.
Multiple Linear Regression Analyses of Determinants of Breastfeeding Success, (n=300)

Model	B	SE	β	t	*p*	95% Confidence Interval	
						Lower	Upper
Constant	8.085	0.294		27.506	**≤ .001**	7.506	8.663
Delivery type (CS)	-0.278	**0.101**	-0.149	-2.765	**.006**	-0.477	-0.080
PSQ support need score	-0.005	**0.001**	-0.203	-3.775	**≤ .001**	-0.008	-0.003
PSQ received support score	0.002	**0.001**	0.107	2.028	**.043**	0.000	0.004
EPDS score	-0.062	**0.013**	-0.261	-4.778	**≤ .001**	-0.087	-0.036

R= 0.458, R^2= 0.210, Adjusted R^2= 0.199, F=19.546, p≤ 0.001, Durbin and Watson=1.951, B: Unstandardized Coefficients Beta, SE: Standard error, β: Standardized Coefficients Beta, CS: Cesarean section, PSQ: Postpartum Support Questionnaire, EPDS: Edinburgh Postpartum Depression Scale, BBAT: Bristol Breastfeeding Assessment Tool

Discussion

This study had four key findings. Firstly, the proportion of those who did not receive sufficient support, and PPD symptoms was high among mothers. Secondly, caesarean section, increased insufficient postpartum support, and PPD symptoms negatively affected breastfeeding success. Third, in women who did not have PPD symptoms and who did not received sufficient postpartum support, cesarean section group breastfeeding success was lower than vaginal delivery group. Fourth, breastfeeding success was lowest in women who delivered by cesarean section, who did not received sufficient postpartum support, and who had PPD.

Table 4.
Comparison of Breastfeeding Success According to Delivery Type, Received Postpartum Support and Postpartum Depression Situations

EPDS status**	PSQ received support	Delivery type				Mean Difference (I-J)	F	$p^{1,2}$	η^2	95% CI for Difference	
		I	BBAT* Mean±SD (I)	J	BBAT* Mean±SD (J)					Lower	Upper
No (n=138)	Sufficient (n=77)	CS (n=26)[a]	6.69±0.83	VD (n=51)[b]	7.13±1.07	-0.445	3.383	.070	0.043	-0.927	0.037
	Insufficient (n=61)	CS (n=26)[c]	6.19±0.69	VD (n=35)[d]	7.02±0.92	-0.836	15.009	**≤.001**	0.203	-1.268	-0.404
Yes (n=162)	Sufficient (n=71)	CS (n=44)[e]	6.29±0.66	VD (n=27)[f]	6.33±0.73	-0.038	0.050	.824	0.001	-0.376	0.300
	Insufficient (n=91)	CS (n=54)[g]	5.88±.0.71	VD (n=37)[h]	5.97±0.72	-0.084	0.298	.568	0.003	-0.390	0.222

CI: Confidence Interval, EPDS: Edinburgh Postpartum Depression Scale, **EPDS status<13 depression no, EPDS≥13 depression yes, η^2: Partial Eta Squared, *BBAT mean score by groups: b>d>a>f>e>c>h>g, PSQ: Postpartum Support Questionnaire, PSQ received support≤99 support insufficient, PSQ received support>99 support sufficient, BBAT: Bristol Breastfeeding Assessment Tool

This study showed that the proportion of those who did not receive sufficient support was 50.7% among all participants and this rate was noticeably high. In addition, mothers were most in need of emotional support. Similarly; Kim et al. (2023) reported that postpartum mothers were more vulnerable to emotional support. Because in the postpartum period, mothers especially needed emotional support, depending on their emotional state and the biological changes they experienced. Maleki-Saghooni et al. (2020) also stated that the support of the husband, who is the emotional priority, was particularly critical in the postnatal period. In parallel with the literature, the findings of this present study show that the need for postpartum support increases in mothers especially in the first month postpartum. Also this finding highlight the need for close people, such as husbands, to be more sensitive to the particular emotional needs of postnatal mothers and to offer specialized help.

In this study, the overall prevalence of PPD symptoms was 54.0%. Norhayati et al (2015) reported the prevalence rate of PPD as 1.9-82.1% in their systematic review study covering many diseases. In addition, Lauzurique et al. (2022) reported that the prevalence of PPD was 16.4% and this rate was highest in the 4th week after birth. For Türkiye, this rate is between 9% and 51% (Karaçam et al.,

2018). As can be seen, most studies have shown that there are large differences in PPD percentages among women. In parallel with the literature, the rate of postpartum depression in this study shows that the risk of postpartum depression increases in mothers especially in the first month postpartum. This is thought to be due to different measurement methods used in different countries and regions to determine the level of postpartum depression, different measurement timings, different samples and different sample sizes, and differences in the cut-off points of the scales used.

In the present study; the multivariate analysis identified various significant predictors effect on breastfeeding success. First; breastfeeding success was 0.14 times lower in participants who experienced caesarean section. Likewise, researchers had shown that cesarean section delivery was associated with poor outcomes which may adversely impact breastfeeding success (Hobbs et al., 2016; Buran et al., 2022). Due to the negative effects of anaesthesia on the mother and the newborn, studies had reported that those who delivered by caesarean section have more postpartum breastfeeding problems and lower breastfeeding success compared to those who delivered vaginally (Nilsson et al., 2020; Hobbs et al., 2016; Ghanbari-Homayi et al., 2020). Secondly; for every one point increase in the need for and receiving of postpartum support, breastfeeding success was 0.20 times lower and 0.17 times higher, respectively. In the study by Mercan and Selçuk (2021), a positive relationship was correlated between breastfeeding self-efficacy level, which is an indicator of breastfeeding success, and support level. Finally; in our study, breastfeeding success was 0.26 times lower for each point increase in the PPD. This is consistent with previous studies that have found a negative association between breastfeeding success and PPD (Vieira et al., 2018; Toledo et al., 2022; Xia et al., 2022). Therefore, in parallel with the literature, the findings of this study show that cesarean delivery, mothers' increased need for postpartum support and postpartum depression negatively affect breastfeeding success. In addition, as the postpartum support increases, breastfeeding success also increases.

In the current study, mothers with PPD, who received insufficient support and who delivered by cesarean section had the lowest breastfeeding success. To our knowledge, there is no study evaluating breastfeeding success in terms of delivery type, postpartum support, and PPD. However, in studies where pair-wise comparisons were the analysis, the results of Shen et al. (2022) who found that cesarean section and PPD symptoms mediated early breastfeeding which is foundation of breastfeeding success. Researchers reported that mothers who delivered by caesarean section need more support than mothers who delivered vaginally due to challenge of postpartum care (Nilsson et al., 2020; Buran et al., 2022). In addition, insufficient postpartum support was reported to cause fatigue and insomnia, which contributed to postpartum of exhaustion and infant care insufficiency in the mother. These factors contributing to presence of PPD had a challenging effect on breastfeeding success (Vieira et al., 2018; Maleki-Saghooni et al., 2020; Mercan & Tari Selçuk, 2021).

Studies have reported potential maternal and neonatal risks of anesthesia (especially general anesthesia) in cesarean deliveries with different anesthetic methods such as spinal or general anesthesia and different analgesic drugs (Buran et al., 2022; Nilsson ve ark. 2020; Hobbs et al., 2016). It has been reported that especially in the post-cesarean period, compared to the period after vaginal delivery, the prolongation of the effective breastfeeding process of the mother's baby, delayed milk secretion, risk of complication development, and delay in recovery (Buran et al., 2022; Shen et al., 2022; Mercan & Tari Selcuk, 2021; Nilsson ve ark. 2020; Hobbs et al., 2016). It has also been reported that mothers need more support after cesarean section than after vaginal delivery due to these important factors (Kim et al., 2023; Mercan & Tari Selcuk, 2021; Nilsson ve ark. 2020). It has been reported that when this support is not provided continuously and adequately in the postpartum period, mothers develop a sense of inadequacy and are prone to depression (Kim et al., 2023; Mercan & Tari Selcuk, 2021; Maleki-Saghooni et al., 2020; Nilsson ve ark. 2020). Therefore, before depression occurs, mothers should be supported especially in the process after cesarean section and their postpartum care and breastfeeding processes should be brought to an optimal level (Buran et al., 2022; Mercan & Tari Selcuk, 2021; Maleki-Saghooni et al., 2020). In the findings of this study, findings parallel to the literature were also found. In mothers who did not have PPD and who received insufficient support, it was determined that breastfeeding success decreased by 20.3% in those who delivered by cesarean section compared to those who delivered vaginally. In the study, in the first postpartum month, among mothers who were not at risk of postpartum depression but who did not receive adequate support, the breastfeeding success of those who had cesarean delivery was significantly lower than those who had vaginal delivery. This finding shows that mothers whose birth was by cesarean section should be adequately supported before postpartum depression occurs, otherwise the breastfeeding process will be significantly negatively affected. This finding is an important clue for clinical care providers to identify and meet the support needs of

mothers before the onset of PPD symptoms, according to the delivery type, in order to promote successful breastfeeding.

Limitations

Limitations of this study include the fact that it was conducted at a single point in time and in a single center and was based on self-report measures, the mode of delivery and type of anesthesia were not examined in detail, the effect of socioeconomic status was ignored, cultural and family structure were not taken into account, and breastfeeding success was assessed at only one time point. Therefore, considering these limitations, it may be recommended to conduct more comprehensive studies in the future examining the effects of type of delivery, need for support and PPD status on breastfeeding success with a larger sample.

Conclusion and Recommendations

According to this study, mothers who delivered by caesarean section, had lack of postpartum support and were at risk of PPD had the lower breastfeeding success. In this respect, in order to achieve global health goals for successful breastfeeding, policy makers should plan additional assessments and interventions that focus on the variables of delivery type, postpartum support need, and presence of PPD symptoms, especially in the context of breastfeeding counselling services in which nurses play an active role.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Muş Alparslan University Scientific Research and Publication Ethics Committee (Date:01.07.2022, No:9/54).

Informed Consent: Written and verbal informed consent was obtained from the participants

Peer-review: Externally peer-reviewed.

Author Contributions: Concept-AK; Design-AK; Supervision-AK; Resources-AK, SG; Data Collection and/or Processing-AK; Analysis and/or Interpretation-AK,SG; Literature Search-AK,SG; Writing Manuscript-AK,SG; Critical Review-AK, SG.

Conflict of Interest: The authors have no conflicts of interest to declare.

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

Etik Komite Onayı: Bu çalışma için etik komite onayı Muş Alparslan Üniversitesi Bilimsel Araştırma ve Yayın Etik Kurulu'ndan (Tarih: 01 Temmuz 2022, Sayı: 9/54) alınmıştır.

Hasta Onamı: Katılımcıların yazılı ve sözlü bilgilendirilmiş gönüllü onamları alınmıştır.

Hakem Değerlendirmesi: Dış bağımsız.

Yazar Katkıları: Fikir- AK; Tasarım-AK; Denetleme-AK; Kaynaklar-AK, SG; Veri Toplanması ve/veya İşlemesi AK; Analiz ve/ veya Yorum-AK, SG; Literatür Taraması-AK, SG; Yazıyı Yazan-AK, SG; Eleştirel İnceleme-AK, SG

Çıkar Çatışması: Yazarlar, çıkar çatışması olmadığını beyan etmiştir.

Finansal Destek: Yazarlar, bu çalışma için finansal destek almadığını beyan etmiştir.

References

Awaliyah, S.N., Rachmawati, I.N., & Rahmah, H. (2019). Breastfeeding self-efficacy as a dominant factor affecting maternal breastfeeding satisfaction. *BMC Nursing,* 18(S1), 30. https://doi.org/10.1186/s12912-019-0359-6

Balcı Yangın, H., Akpınar, A., Çakmak, H., Çalışkan Özdöl, F., & Akçakuş, M. (2021). Exclusive breastfeeding for 6 months postpartum and factors associated with success in a tertiary care baby-friendly hospital. *Journal of Perinatal and Neonatal Nursing*, 35(3), 266-274. https://doi.org/10.1097/JPN.0000000000000557

Buran, G., Ozyazicioglu, N., Aydın, A.I., & Atak M. (2022). Evaluation of breastfeeding success and self-efficacy in mothers giving birth via vaginal delivery or cesarean section: a cross-sectional study. *Women & Health*, 62(9-10), 788-798. https://doi.org/10.1080/03630242.2022.2146832

Chen, J., Lai, X., Zhou, L., Retnakaran, R., Wen, S.W., Krewski, D., Huang, L., Li, M., & Xie, R. (2022). Association between exclusive breastfeeding and postpartum post-traumatic stress disorder. *International Breastfeeding Journal*, 17(1), 78. https://doi.org/10.1186/s13006-022-00519-z

Cooke, M., Sheehan, A., & Schmied, V. (2003). A description of the relationship between breastfeeding experiences, breastfeeding satisfaction, and weaning in the first 3 months after birth. *Journal of Human Lactation*, 19(2), 145-156. d https://doi.org/10.1177/0890334403252472

Cox, J.L., Holden, J.M., & Sagovsky, R. (1987). Detection of postnatal depression. *British Journal of Psychiatry*, 150(6), 782-786. https://doi.org/10.1192/bjp.150.6.782

de Senna, A.F.K., Giugliani, C., Avilla, J., Bizon, A.M.B.L., Martins, A.C.M., & Giugliani, E.R.J. (2020). Maternal satisfaction with breastfeeding in the first month postpartum and associated factors. *International Breastfeeding Journal*, 15(1), 72. https://doi.org/10.1186/s13006-020-00312-w

Dolgun, G., İnal, S., Erdim, L., & Korkut, S. (2018). Reliability and validity of the Bristol breastfeeding assessment tool in the Turkish population. *Midwifery*, 57, 47-53. https://doi.org/10.1016/j.midw.2017.10.007

Engindeniz, A. N., Küey, L., & Kültür, S. (1997). *Turkish version of the Edinburg postpartum depression scale: reliability and validity study*. In: Spring symposiums I Book, psychiatric organization of Turkey, 1, 51–52

Ertürk, N. (2007). *Adaptation of the postpartum support questionnaire into Turkish society*. Ege University Health Sciences Institute, Unpublished Master Thesis. Published online 2007.

Faul, F., Erdfelder, E., Lang, A.G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175-191. https://doi.org/10.3758/BF03193146

Ghanbari-Homayi, S., Fardiazar, Z., Mohammad-Alizadeh-Charandabi, S., Meedya S., Jafarabadi, M.A., Mohammadi, E., & Mirghafourvand, M. (2020). Skin-to-skin contact, early initiation of breastfeeding and childbirth experience in first time mothers: a cross sectional study. *Journal of Neonatal Nursing*, 26(2), 115-119. https://doi.org/10.1016/j.jnn.2019.08.003

Hobbs, A.J., Mannion, C.A., McDonald, S.W., Brockway, M., & Tough, S.C. (2016). The impact of caesarean section on breastfeeding initiation, duration and difficulties in the first four months postpartum. *BMC Pregnancy and Childbirth*, 16(1), 90. https://doi.org/10.1186/s12884-016-0876-1

Ingram, J., Johnson, D., Copeland, M., Churchill, C., & Taylor H. (2015). The development of a new breast feeding assessment tool and the relationship with breast feeding self-efficacy. *Midwifery*, 31(1), 132-137. https://doi.org/10.1016/j.midw.2014.07.00

Karaçam, Z., Çoban, A., Akbaş, B., & Karabulut, E. (2018). Status of postpartum depression in Turkey: a meta-analysis. *Health Care for Women International*, 39(7), 821-841. https://doi.org/10.1080/07399332.2018.1466144

Kartal, T., & Gürsoy, E. (2020). The importance of breastfeeding in sustainable development goals (2015-2030), and the duties of nurse in the light of the current situation in Turkey. *Mersin University School of Medicine Lokman Hekim Journal of History of Medicine and Folk Medicine,* 10(2), 147-153. https://doi.org/10.31020/mutftd.676389

Kim, S., Kim, D.J., Lee, M.S., & Lee, H. (2023). Association of social support and postpartum depression according to the time after childbirth in South Korea. *Psychiatry Investigation,* 20(8), 750-757. https://doi.org/10.30773/pi.2023.0042

Lauzurique, M.E., Vera Fernández, Y., Dennis, C.L., Quesada, MR., Valdés, G.Á., Lye, S., & Tamayo-Pérez, V. (2022). Prevalence, incidence, and persistence of postpartum anxiety, depression, and comorbidity. *Journal of Perinatal and Neonatal Nursing*, 36(4), E15-E24. https://doi.org/10.1097/JPN.0000000000000662

Logsdon, M., Usui, W., Birkimer, J., & McBride, A. (1996). The postpartum support questionnaire: reliability and validity. *Journal of Nursing Measurement*, 42(2), 129-142.

Maleki-Saghooni, N., Amel Barez, M., & Karimi, F.Z. (2020). Investigation of the relationship between social support and breastfeeding self-efficacy in primiparous breastfeeding mothers. *The Journal of Maternal-Fetal & Neonatal Medicine*, 33(18), 3097-3102. https://doi.org/10.1080/14767058.2019.1568986

Mercan, Y., & Tari Selcuk, K. (2021). Association between postpartum depression level, social support level and breastfeeding attitude and breastfeeding self-efficacy in early postpartum women. Cerniglia L, ed. *PLoS One*, 16(4), e0249538. https://doi.org/10.1371/journal.pone.0249538

Mikšić, Š., Uglešić, B., Jakab, J., Holik, D., Milostić Srb, A., & Degmečić, D. (2020). Positive effect of breastfeeding on child development, anxiety, and postpartum depression. *International Journal of Environmental Research and Public Health*, 17(8), 2725. https://doi.org/10.3390/ijerph17082725

Mortazavi, F., Mousavi, S.A., Chaman, R., Wambach, K.A., Mortazavi, S.S., & Khosravi, A. (2015). Breastfeeding practices during the first month postpartum and associated factors: impact on breastfeeding survival. *Iranian Red Crescent Medical Journal,* 17(4). https://doi.org/10.5812/ircmj.17(4)2015.27814

Nilsson, I.M.S., Kronborg, H., Rahbek, K., & Strandberg-Larsen, K. (2020). The significance of early breastfeeding experiences on breastfeeding self-efficacy one week postpartum. *Maternal & Child Nutrition*, 16(3). https://doi.org/10.1111/mcn.12986

Norhayati, M.N., Nik Hazlina, N.H., Asrenee, A.R., & Wan Emilin, W.M.A. (2015). Magnitude and risk factors for postpartum symptoms: a literature review. *Journal of Affective Disorders,* 175, 34-52. https://doi.org/10.1016/j.jad.2014.12.041

Said-Mohamed, R., Pettifor, J.M., & Norris, S.A. (2018). Life History theory hypotheses on child growth: Potential implications for short and long-term child growth, development and health. *American Journal of Physical Anthropology,* 65(1), 4-19. https://doi.org/10.1002/ajpa.23340

Shen, X., Lin, S., Li, H., Amaerjiang, N., Shu, W., Li, M., Xiao, H., Segura-Pérez, S., Pérez-Escamilla, R., Fan, X., & Hu, Y. (2022). Timing of breastfeeding initiation mediates the association between delivery mode, source of breastfeeding education, and postpartum depression symptoms. *Nutrients*, 14, 2959. https://doi.org/10.3390/nu14142959

Toledo, C., Cianelli, R., Villegas Rodriguez, N., De Oliveira, G., Gattamorta, K., Wojnar, D., & Ojukwu, E. (2022). The significance of breastfeeding practices on postpartum depression risk. *Public Health Nursing*, 39(1), 15-23. https://doi.org/10.1111/phn.12969

Turkey Demographic and Health Survey (TDHS) 2018. Hacettepe University of Population Studies. Published

2018. Accessed August 22, 2023. http://www.hips.hacettepe.edu.tr/tnsa2018/rapor/TNSA2018_ana_Rapor.pdf

United Nations Children's Fund (UNICEF). Infant and Young Child Feeding. Published 2021. Accessed January 13, 2022. https://data.unicef.org/topic/nutrition/infant-and-young-child-feeding/

Vieira, E. de S., Caldeira, N.T., Eugênio, D.S., Lucca, M.M. di., & Silva, I.A. (2018). Breastfeeding self-efficacy and postpartum depression: a cohort study. *Revista Latino-Americana de Enfermagem,* 26, e3035. https://doi.org/10.1590/1518-8345.2110.3035

World Health Organization (WHO). Global strategy for infant and young child feeding. Published 2003. Accessed May 1, 2021. http://whqlibdoc.who.int/publications/2003/9241562218.pdf

Xia, M., Luo, J., Wang, J., & Liang, Y. (2022). Association between breastfeeding and postpartum depression: a meta-analysis. *Journal of Affective Disorders*, 308, 512-519. https://doi.org/10.1016/j.jad.2022.04.091

Yang, Z., Ding, Y., Song, S., Zhang, Y., Li, A., Su, M., & Xu, Y. (2023). Factors affecting the breastfeeding duration of infants and young children in China: A cross-sectional study. *Nutrients*, 15, 1353. https://doi.org/10.3390/nu15061353

Genişletilmiş Özet

Emzirme sorunları genellikle doğumdan sonraki postpartum dönemde ortaya çıkar ve postpartum dönemde emzirmeyi etkileyen birçok faktör mevcuttur. Emzirmeyi etkileyen faktörlerin bilinmesi ve risk faktörlerini azaltacak önlemlerin alınması doğum sonrası anne ve bebek sağlığının olumlu yönde sürdürülmesi için önemlidir. Literatürde emzirme başarısını en çok etkileyen faktörler arasında doğum şekli, doğum sonrası destek ihtiyacı ve postpartum depresyon yer almaktadır. Özellikle doğum şekli açısından bakıldığında sezaryenle doğum yapan annelerde postpartum erken ve geç dönemde emzirme sorunları daha sık görülmekte, bunun da sebebi sıklıkla sezaryen operasyonu sırasında annenin klinik durumuna göre spinal veya genel anesteziye maruz kalma, operasyon sırasında anneye anestezik ve analjezik etkili ilaçların verilmesi nedeniyle postpartum toparlanma ve iyileşme sürecinde gecikme, sezaryen sonrası dönemde olası komplikasyon gelişme riski ve iyileşmenin gecikmesi, operasyon sırasında alınan anestezik ve analjezik ilaçların anneden bebeğe geçişi nedeniyle yenidoğan üzerinde olumsuz etkilere sebebiyet vermesine bağlanmaktadır. Anestezinin yan etkileri arasında sıklıkla emzirme sürecini olumsuz etkileyebilen ve yenidoğanda uyku hali ve emme refleksinde azalma gibi sorunlara da neden olarak annenin emzirme başarısının olumsuz etkilenmesine neden olmaktadır. Doğum sonrası dönemde anneler postpartum hem erken hem de geç dönemde sıklıkla kendi ve bebeğinin bakımında özellikle desteğe ihtiyaç duymaktadırlar. Postpartum erken ve geç dönemde yeterli destek alamayan anneler emzirme üzerinde daha olumsuz bir etkiye sahip olan doğum sonrası depresyona daha yatkın olmaktadır. Özellikle postpartum depresyon, postpartum semptomların en sık gözlendiği postpartum birinci ayda daha sık belirginleşmektedir. Literatürde doğum şekline göre emzirme başarısını inceleyen çalışmalar olmasına rağmen doğum şekli, doğum sonrası destek durumu ve doğum sonrası depresyon durumuna göre emzirme başarısını inceleyen çoklu karşılaştırma grubu ile yapılan bir araştırmaya da rastlanmamıştır. Bu çalışmanın amacı doğum şekli, doğum sonrası destek ihtiyacı ve doğum sonrası depresyonun doğum sonrası ilk aydaki emzirme başarısı üzerindeki etkisini araştırmaktır. Bu çalışma 8 Ağustos 2022 ile 31 Ağustos 2023 tarihleri arasında yürütülmüş olup karşılaştırmalı, prospektif ve kesitseldir. Örneklem 300 kadından (150 vajinal, 150 sezaryen) oluşmaktadır. Veriler Tanıtıcı Bilgi Formu, Doğum Sonrası Destek Anketi, Edinburgh Doğum Sonrası Depresyon Ölçeği ve Bristol Emzirme Değerlendirme Aracı kullanılarak toplanmıştır. Veriler basit randomizasyon yöntemiyle toplanmıştır. Araştırmada tüm doğum yapan kadınların önce sosyodemografik ve obsteterik özellikleri verilmiştir. Daha sonra doğum şekline göre annelerin sosyodemografik ve obstetrik özelliklerinin farklılık analizi yapılmıştır. Doğum şekline göre sosyodemografik ve obstetrik özellikler açısından fark saptanmamıştır. Daha sonra hem annelerin tümümünün hem de annelerin doğum şekline göre Doğum Sonrası Destek Anketi, Edinburgh Doğum Sonrası Depresyon Ölçeği ve Bristol Emzirme Değerlendirme Aracı puan ortalamaları analiz edilmiştir. Doğum şekline göre Doğum Sonrası Destek Anketi, Edinburgh Doğum Sonrası Depresyon Ölçeği ve Bristol Emzirme Değerlendirme Aracı puan ortalamaları anlamlı farklılık göstermiştir. Daha sonra Doğum Sonrası Destek Anketi ve Edinburgh Doğum Sonrası Depresyon Ölçeği kesme noktalarına göre hem annelerin tümünün hem de doğum şekline göre postpartum alınan desteğin yeterlilik durumu ve postpartum destek durumu hesaplanmıştır. Annelerin emzirme başarısının belirleyicilerini tanımlamak için de çoklu doğrusal regresyon analizi yapılmıştır. Ayrıca doğum şekli, postpartum alınan yeterli destek durumu ve postpartum depresyon durumu açısından çoklu grup karşılaştırması yapılmıştır. Dolayısıyla yapılan bu araştırmada dört temel bulgu saptanmıştır. İlk olarak anneler arasında yeterli destek almayanların oranı %50.7, postpartum depresyon varlığı %54.0 ve ortalama emzirme başarı puanının 6.4±0.9 olduğu, dolayısıyla yeterli destek almayanların ve PPD semptomları gösterenlerin oranının yüksek olduğu, annelerin emzirme başarısının ise orta düzeyde olduğu belirlenmiştir. İkinci olarak, sezaryenle doğum (β=-0.149, $p<0.01$), doğum sonrası destek ihtiyacının artması (β=-0.203, $p<0.01$) ve doğum sonrası depresyon (β=0.261, $p<0.01$) emzirme başarısındaki toplam varyansın %21.0'ini açıklayan anlamlı yordayıcılar olduğu belirlenmiştir. Dolayısıyla doğumun sezaryenle gerçekleşmesi, artan yetersiz doğum sonrası destek ve PPD semptomları emzirme başarısını olumsuz etkilemiştir. Üçüncü olarak, doğum sonrası depresyonu olmayan ancak yetersiz destek alan sezaryenle doğum yapan annelerin emzirme başarısı vajinal doğum yapan annelere kıyasla %20.3 oranında azalmıştır. Dolayısıyla PPD semptomları olmayan ve yeterli doğum sonrası destek almayan kadınlarda sezaryen grubunun emzirme başarısı vajinal doğum grubuna göre daha düşük saptanmıştır. Dördüncü olarak, sezaryenle doğum yapan, yeterli doğum sonrası destek almayan ve PPD'si olan kadınlarda emzirme başarısı en düşük belirlenmiştir. Dolayısıyla sezaryenle doğum yapan, doğum sonrası destek almayan ve doğum sonrası depresyon riski taşıyan annelerin en düşük emzirme başarısına sahip olduğu belirlenmiştir. Doğumun sezaryenle gerçekleşmesi, doğum sonrası destek ihtiyacında artış, doğum sonrası alınan yetersiz destek ve doğum sonrası depresyon emzirme başarısını önemli ölçüde etkileyen faktörler olduğu belirlenmiştir. Doğum sonrası dönemdeki anneler doğum şekli, doğum sonrası destek ve doğum sonrası depresyon riski açısından dikkatle değerlendirilmelidir. Bu bulgu doğumu sezaryenle gerçekleşen annelerin doğum sonrası özellikle birinci ayda depresyon ortaya çıkmadan önce yeterli şekilde desteklenmesi gerektiğini, aksi takdirde emzirme sürecinin önemli ölçüde olumsuz etkileneceğini göstermektedir. Ayrıca emzirme başarısını etkileyen bu temel faktörler göz önünde bulundurulduğunda sezaryen ile doğum

yapan, destek almayan ve depresyon riski taşıyan annelerin emzirme süreci olumsuz etkilendiğinden bakım sürecinde daha fazla desteklenmeleri gerekmektedir. Annelerin doğum sonrası ihtiyaç duydukları desteğe erişebilmeleri için özellikle doğum sonrası depresyon ortaya çıkmadan önce yakınlarının ve sağlık profesyonellerinin annenin ihtiyaçlarına karşı duyarlı olmaları konusunda farkındalık oluşturulmalıdır. Bu bulgu, klinik bakım sağlayıcılarının başarılı emzirmeyi teşvik etmek amacıyla doğum türüne göre PPD semptomları başlamadan önce annelerin destek ihtiyaçlarını belirlemesi ve bu ihtiyaçların klinik bakım sağlayıcılar ile annenin eşi, ailesi, bakım ve destek veren yakın çevresi tarafından karşılanması için önemli bir ipucu oluşturmaktadır.