

Three spirals: Breastfeeding problems, growth spurts, and postpartum depression

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Abstract

Purpose: The inadequacy experienced in maintaining breastfeeding was tried to be understood within the framework of Meleis' theory, and its relationship with growth spurts and postpartum depression was attempted to be revealed.

Design and Methods: The study was planned in a case-control type web-based descriptive research design. Mothers ($n = 572$), who thought that they experienced breastfeeding problems, constituted the case group of the study, and mothers ($n = 524$), who thought that they did not experience breastfeeding problems, constituted the control group.

Findings: A statistically significant relationship was found between the case and control groups in terms of growth spurts and depression risk.

Practice Implications: It is recommended to determine mothers' mood changes and breastfeeding problems they experience on the first postpartum days, to provide counseling to them.

KEYWORDS

breastfeeding problems, growth spurts, postpartum depression, postpartum period

1 | INTRODUCTION

According to the data of the 2013 Turkey Demographic and Health Survey, breastfeeding is common in Turkey, and 96% of children have been breastfed for a certain period. It is stated that 57.9% of infants younger than 2 months are exclusively breastfed; this ratio decreases to 35.4% in infants aged 2–3 months and to 9.5% in infants aged 4–5 months. In Turkey, the breastfeeding rate between 24 and 27 months is 14%.¹ These results indicate that although breastfeeding is common in Turkey, there is an inadequacy in maintaining it.

The postpartum period is a critical transition period when psychological and social changes occur along with physical changes.² According to Meleis' transition theory, birth and breastfeeding are regarded as an essential transition phase in women's lives during the postpartum period.^{3,4} The transitional experience of every woman is unique. However, in parallel with the examples given above, some beliefs in Turkish culture may

cause women to be exposed to excessive external interventions in the transition to motherhood.

Events during the transition process and interventions may affect mothers' emotional states, and this may also be an essential factor that affects their breastfeeding behaviors. While planned pregnancy facilitates transition, excessive exposure to interventions during adaptation in the postpartum period disrupts the sense of emotional and physical well-being, and hinders the transition.⁴ Therefore, women's risk of getting psychiatric diseases increases. Among these diseases, postpartum depression is a disorder that progresses with depressive mood, guilt, fatigue, sleep disorders, the loss of appetite, anhedonia, suicidal and/or homicidal thoughts, and other somatic symptoms.⁵

It is stated that the mother's low level of education, working, late initiation of breastfeeding, not being sufficiently informed about breastfeeding and not receiving support from healthcare workers, insufficient intrafamilial support, and using a feeding bottle and pacifier cause problems in maintaining breastfeeding.⁶ Although it is a significant issue,

there are few studies on this issue, and thus, there is a need for studies on problems that prevent maintaining breastfeeding.

On the other hand, culturally independently of excessive interventions during the transition period, it was determined by the clinical observation of the researcher IBCLC that the periods, called “growth spurts,” overlap with breastfeeding problems during this transition period and breakings related to breastfeeding are experienced during spurt periods.

The development process of a child is defined as “growing pains.” A child experiences 10 spurts, which last for an average of 3–4 weeks until the age of 7. During this period, infants cry intensely, want to suck continuously, or refuse to be fed. Infants who want to be breastfed all day long cause most mothers to think that their milk is not sufficient during this period.⁷ Growth spurts of infants, who do not want to be breastfed, may have consequences leading to the termination of breastfeeding. Therefore, the fact that the infant experiences a growth spurt may cause the mother to feel inadequate in breastfeeding and to experience psychological problems.

In the literature, it is argued that breastfeeding problems occur as a result of depression,^{8–10} and few studies advocate that the growth spurts of an infant affect the process adversely.¹¹ However, recent studies have indicated that there may be a bidirectional relationship between breastfeeding and depression. Therefore, depression may cause breastfeeding problems, and breastfeeding problems may cause depression.^{9,12}

1.1 | Research aim

In the literature, there are no large-scale studies examining growth spurts and postpartum depression in Turkish women with regard to breastfeeding problems. In this study, the inadequacy experienced in maintaining breastfeeding, although it is a traditional norm, was attempted to be understood within the framework of Meleis' theory and revealing its relationship with growth spurts and postpartum depression among the transition period events constituted the subject of the study. In this regard, it is believed that the study will make an essential contribution to the literature.

2 | MATERIALS AND METHODS

2.1 | Study design

The study was conducted in a case-control type web-based descriptive research design.

2.2 | Participants

The population of the study comprised of mothers who had children aged 0–1 years. The sample of the study included 1096 women who were members of social media groups between May 2019 and July 2019 and who agreed to participate in the study. Mothers ($n = 572$), who thought

that they experienced breastfeeding problems, constituted the case group of the study, while mothers ($n = 524$), who thought that they did not experience breastfeeding problems, constituted the control group.

2.3 | Data collection tools

The research data were collected using the descriptive information form prepared by the researchers and the Edinburgh Postpartum Depression Scale (EPDS).

2.3.1 | Descriptive information form

The form consists of nine questions, including questions about women's age, educational status, socioeconomic status, the day of the postpartum period, the number of children, the status of thinking that she experiences breastfeeding problems, a history of previous depression, perception of receiving spousal support, and birth type.

The status of having growth spurts was determined by referencing the book of van de Rijt and Plooij entitled “10 Big Fussy Periods of Infants.” An infant experiences 10 growth spurts at Weeks 5, 8–9, 12, 15–19, 23–26, 34–37, 42–46, 51–54, 60–64, and 71–75. Almost all of the infants experience fussiness during the same period, but there may be 1–2-week shifts. Therefore, infants at the specified weeks or ± 2 weeks were accepted to be in the period of growth spurts.¹³

2.3.2 | Edinburgh Postpartum Depression Scale

The scale developed by Cox et al.¹⁴ is the most commonly used scale for screening and evaluating postpartum depression. The validity and reliability studies of the scale were performed by Engindeniz et al.,¹⁵ and its Cronbach's α coefficient was determined as .79. The scale consists of 10 questions asking the mother to state how she has felt during the previous week by marking one of the four different options. The lowest score that can be obtained from the scale is 0, and the highest score is 30.¹⁵ In this study, Cronbach's α coefficient of the scale was found as .86.

2.4 | Data collection

The descriptive information form was prepared by the researchers and uploaded to the web environment. By sharing it on various forums or social media groups for mothers, they were invited to participate in the study. The responses of the participants were transferred to the data evaluation program.

2.5 | Data analysis

In the statistical analysis of the data, descriptive statistics were used, the χ^2 test was conducted to compare percentage data between the

groups, the independent samples *t*-test and the one-way analysis of variance were used to compare averages in normally distributed parametric data, and logistic regression analysis was conducted to determine factors affecting postpartum depression. The statistical significance level was accepted as $p < .05$.

2.6 | Ethics

The Ethics Committee permission (numbered E.2268 and dated May 14, 2019) was obtained before starting the study. The aim of the study was defined to the participants, and they were informed that they were free to participate in the study in accordance with the principle of volunteering, that they could withdraw at any time, and their responses would be kept confidential.

3 | RESULTS

3.1 | Sociodemographic and obstetric characteristics of the groups

A total of 1096 women participated in the study. The mean score of the EPDS of all participants was 16.18 ± 5.69 , and it was determined that 73.8% of the participants were at risk of depression according to their total scores.

The participants were divided into two groups according to their thoughts on experiencing breastfeeding problems. Women who thought that they experienced breastfeeding problems were included in the case group ($n = 572$), and women who thought that they did not experience breastfeeding problems were included in the control group ($n = 524$).

The mean age of the participants was 29.34 ± 4.10 years (case group: 29.36 ± 4.00 years, control group: 29.32 ± 4.21 years), and there was no statistically significant difference between the mean ages of the groups ($p = .879$). It was determined that 30.7% of the participants were on the 41st–90th lactation day, that 52.2% experienced breastfeeding problems, that 34.9% had had depression in the past, and that 57.6% thought that their spouses provided support. Of the women, 37.2% gave birth by cesarean section with epidural anesthesia, and they were on days 81.32 ± 74.15 postpartum on average. Of the infants, 40.2% were in a growth spurt period.

Of the case group, 68.9% were university graduates, 51% had equal income–expenditure balance, and 32.5% were on the 41st–90th lactation day. Of the women, 55% reported that they experienced breastfeeding problems, 63.8% of them stated that they had a history of depression, and 60% thought that their spouses provided support. Of the women, 57.6% gave birth by cesarean section, and they were on days 79.24 ± 67.76 postpartum. Of the infants, 43.4% were in a growth spurt period.

Of the women in the control group, 67.7% were university graduates, and 45.8% had equal income–expenditure balance. Of the participants, 97.5% were breastfeeding their infants, and 28.8% were

on the 41st–90th lactation day. It was determined that 66.6% of the women did not have a history of depression, and 55% thought that their spouses provided support. Of the women, 37.2% gave birth by cesarean section with epidural anesthesia, and they were on days 83.59 ± 80.55 postpartum.

3.2 | Comparison of the groups in terms of the sociodemographic and independent variables

The groups are compared in terms of the sociodemographic and independent variables in Table 1. Accordingly, a statistically significant relationship was determined between the groups in terms of being in a growth spurt period ($p = .028$), the number of lactation days ($p = .043$), and spousal support ($p = .043$).

3.3 | Comparison of the groups according to growth spurts and the mean postpartum depression scores

There was a statistically significant relationship between the groups in terms of growth spurts ($p = .028$) and depression risk ($p = .000$). It was found that women who were at risk of depression and had children in the period of growth spurts experienced more breastfeeding problems (Table 2).

3.4 | The relationship between the sociodemographic and independent variables and the mean EPDS scores

A significant relationship was determined between the participants' income status ($p = .000$), the status of thinking that they experienced breastfeeding problems ($p = .000$), the number of lactation days ($p = .001$), a history of depression ($p = .000$), the status of receiving spousal support ($p = .000$), the number of postpartum days ($p = .000$), and the mean postpartum depression scores. As a result of the study, it was found that the risk of depression increased in women who had high expenditures, who thought that they experienced breastfeeding problems, who had a history of depression, and who thought that their husbands did not provide support (Table 3).

3.5 | Risk factors according to the EPDS scores

According to the results of the logistic regression analysis conducted to examine the variables affecting the scale scores, the prevalence of depression increased by 1.64 times ($p = .001$) in women who stated that they experienced breastfeeding problems, by 1.81 times ($p = .000$) in women with a history of depression, and by 0.28 times ($p = .000$) in women who stated that they did not receive spousal support. Furthermore, the risk of postpartum depression decreased by 1.29 times as the number of lactation days progressed ($p = .045$).

Characteristics	Case group n (%)	Control group n (%)	Test and p value
Age means ($x \pm SD$)	29.36 \pm 4.00	29.32 \pm 4.21	$t = 0.152$ $p = .879$
Education			
Middle school	13 (2.3)	19 (3.6)	$\chi^2 = 2.949$ $p = .400$
High school	86 (15.0)	69 (13.2)	
University	394 (68.9)	355 (67.7)	
Master	79 (13.8)	81 (15.5)	
Income status			
Equal income and expense	292 (51.0)	240 (45.8)	$\chi^2 = 4.017$ $p = .134$
Expenditure more	169 (29.5)	183 (34.9)	
Income more	111 (19.4)	101 (19.3)	
Number of children			
1	445 (77.8)	397 (75.8)	$\chi^2 = 0.635$ $p = .728$
2	102 (17.8)	102 (19.5)	
3 and above	25 (4.4)	25 (4.8)	
Being in the growth milestones period			
Yes	248 (43.4)	193 (36.8)	$\chi^2 = 4.841$ $p = .028$
No	324 (56.6)	331 (63.2)	
The number of lactational days			
3–6 days	11 (1.9)	18 (3.4)	$\chi^2 = 11.472$ $p = .043$
7–20 days	68 (11.9)	60 (11.5)	
21–40 days	136 (23.8)	140 (26.7)	
41–90 days	186 (32.5)	151 (28.8)	
91–180 days	125 (21.9)	92 (17.6)	
181 day and above	46 (8.0)	63 (12.0)	
History of depression			
There is	207 (36.2)	175 (33.4)	$p = .183^a$
No	365 (63.8)	349 (66.6)	
Spouses support			
Yes	343 (60.0)	288 (55.0)	$p = .043^a$
No	229 (40.0)	236 (45.0)	
Delivery type			
Emergency cesarean section	56 (9.8)	26 (5.0)	$\chi^2 = 2.071$ $p = .723$
Cesarean section after birth waves	49 (8.6)	59 (11.3)	
Epidural cesarean section	213 (37.2)	195 (37.2)	
General anesthesia cesarean section	57 (10.0)	56 (10.7)	
Normal delivery	197 (34.4)	188 (35.9)	
The number of lactational days ($x \pm SD$)	79.24 \pm 67.76	83.59 \pm 80.55	$t = -0.971$ $p = .332$

Note: Statistically significant values are indicated in bold.

^aFisher's exact test.

TABLE 1 Comparison of the groups in terms of sociodemographic and independent variables

	Case group ($x \pm SD$)	Control group ($x \pm SD$)	t	p Value
Being in the growth milestones period	1.57 \pm 0.50	1.63 \pm 0.48	-2.203	.028
Postpartum depression	16.89 \pm 5.51	15.41 \pm 5.80	4.340	.000

Note: Statistically significant values are indicated in bold.

TABLE 2 Comparison of the groups according to growth milestones and the mean postpartum depression scores

TABLE 3 The relationship between sociodemographic and independent variables and the mean EPDS scores

Variables	n (%)	($x \pm SD$)	Test and <i>p</i> value
Age means ($x \pm SD$)	29.34 \pm 4.10		$r = -0.050$ $p = .098$
Education			
Middle School	32 (2.9)	16.81 \pm 6.44	$F = 1.608$
High school	155 (14.1)	17.03 \pm 5.79	$p = .186$
University	749 (68.3)	16.05 \pm 5.65	
Master	160 (14.6)	15.84 \pm 5.60	
Income status			
Equal income and expense	532 (48.5)	15.77 \pm 5.55	$F = 9.639$
Expenditure more	352 (32.1)	17.26 \pm 5.60	$p = .000$
Income more	212 (19.3)	15.44 \pm 5.96	
Number of children			
1	842 (76.8)	16.15 \pm 5.77	$F = 1.884$
2	204 (18.6)	15.94 \pm 5.39	$p = .152$
3 and above	50 (4.6)	17.66 \pm 5.44	
Experienced breastfeeding problems			
Yes	572 (52.2)	16.89 \pm 5.50	$t = 4.340$
No	524 (47.8)	15.41 \pm 5.80	$p = .000$
Being in the growth milestones period			
Yes	441 (40.2)	16.47 \pm 5.55	$t = 1.374$
No	655 (59.8)	15.99 \pm 5.78	$p = .170$
History of depression			
There is	382 (34.9)	17.50 \pm 5.51	$t = 5.702$
No	714 (65.1)	15.47 \pm 5.66	$p = .000$
Spouses support			
Yes	631 (57.6)	14.74 \pm 5.60	$t = -10.220$
No	465 (42.4)	18.14 \pm 5.21	$p = .000$
Delivery type			
Emergency cesarean section	82 (7.5)	17.11 \pm 5.89	$F = 0.667$
Cesarean section after birth waves	108 (9.9)	16.04 \pm 5.74	$p = .615$
Epidural cesarean section	408 (37.2)	16.11 \pm 5.59	
General anesthesia cesarean section	113 (10.3)	16.37 \pm 5.82	
Normal delivery	385 (35.1)	16.04 \pm 5.71	

Note: Statistically significant values are indicated in bold.

Abbreviation: EPDS, Edinburgh Postpartum Depression Scale.

and by 0.99 times as the number of postpartum days progressed ($p = .022$; Table 4).

4 | DISCUSSION

4.1 | Discussion of the scale scores

Although different rates are presented due to differences in methods used for the prevalence of postpartum depression, which is the most common complication of childbirth, research shows that it develops in approximately 10%–15% of newly delivered women.¹⁶ In a study conducted on 6–8-week puerperal women in our country, it was detected that the mean postpartum depression score was 9.58 ± 5.10 and that 31.7% of the mothers received a score of 13 and above from

the scale.¹⁷ In another study similar to our study in terms of methodology, the mean postpartum depression score of women was 11.68 ± 5.75 , and a statistically significant relationship was found between depression and breastfeeding.¹² In this study, it was determined that the mean postpartum depression score of the participants was 16.18 ± 5.69 , and 73.8% of them were at risk of depression. In the literature, the reasons for considerable variation in the prevalence of postpartum depression are shown as the fact that women are evaluated at different times after giving childbirth, differences in sample size, population differences, diagnostic tools, the cutting point of the tools, and the place where it was made.¹⁸ The reason for the different rates of postpartum depression risk in this study from the literature is thought to be the fact that the participants were in a wide range of time after giving childbirth when they were evaluated (mean: 81.32 ± 74.15 days, range: 0–364 days).

TABLE 4 Risk factors according to the EPDS scores (logistic regression results)

Variables	β	SE	Wald	p Value	Exp(B)
Age	-.007	0.021	0.107	.744	0.993
Education	.093	0.130	0.511	.475	1.097
Income status	.019	0.094	0.041	.840	1.019
Number of children	-.169	0.156	1.171	.279	0.844
Being in the growth milestones period	.119	0.286	0.172	.678	1.126
Experienced breastfeeding problems	.491	0.150	10.711	.001	1.635
The number of lactational days	.252	0.126	4.024	.045	1.287
History of depression	.595	0.163	13.405	.000	1.814
Spouses support	-1.265	0.164	59.631	.000	0.282
Delivery type	.106	0.059	3.304	.069	1.112
The number of postpartum days	-.006	0.003	5.266	.022	0.994
Constant*	-2.014	1.159	3.023	.082	0.133

Note: Statistically significant values are indicated in bold.

Abbreviation: EPDS, Edinburgh Postpartum Depression Scale.

*Model $\chi^2 = 116.937$; $p = .000$; $R^2 = .148$.

4.2 | Discussion of the comparison of the case and control groups

The relationship between the participants' status of experiencing breastfeeding problems and having infants in the period of growth spurts is significant. This finding supports the findings obtained by van de Rijt and Plooij.¹³

A significant relationship was determined between experiencing breastfeeding problems and the number of lactation days. As the number of lactation days progresses, the incidence of breastfeeding problems decreases. In her theory, Meleis stated that mothers develop adaptation and coping techniques as the postpartum period progresses.⁴ In other words, it is thought that breastfeeding problems decrease as the adaptation period progresses.

The relationship between experiencing breastfeeding problems and thinking that the spouse provided support was found to be significant. In a systematic review of breastfeeding problems and interventions performed for these problems, it is stated that social support is effective in reducing breastfeeding problems and improving breastfeeding success.¹⁹ Our findings support the literature findings.

The relationship between postpartum depression and thinking that mothers experienced breastfeeding problems were significant. In a prospective study in which the relationship between postpartum depression and breastfeeding was examined at three different times postpartum, it was determined that the risk of depression decreased with prolonged breastfeeding at postpartum Week 8, and although there was no statistically significant difference at Months 8, 21, and 32, breastfeeding was demonstrated to reduce postpartum depression scores.²⁰ In this study,

the result related to the depression score for breastfeeding was similar to the study conducted by Borra et al.²⁰

4.3 | Discussion of risk factors according to the EPDS scores

It was determined that the mean postpartum depression scores of mothers, who had high expenditures, were higher. The studies conducted in Turkey indicated that the incidence of postpartum depression increased as the income level decreased.^{16,21,22} Our results are similar to those in the literature.

In this study, the risk of postpartum depression in women, who thought that they experienced breastfeeding problems, increased by 1.64 times. It is stated that postpartum depression is more common, especially in mothers who cannot breastfeed although they have intended to breastfeed during pregnancy,²⁰ and that the mean scores of breastfeeding self-sufficiency of women who have experienced depression are lower.⁸ It can be said that depressed mothers are more concerned about breastfeeding and that they have negative thoughts about the nutritive value and adequacy of their milk.¹²

As the number of lactation days progresses, the risk of postpartum depression decreases by 1.29 times. According to Meleis' transition theory, there are factors that facilitate and prevent the transition to motherhood. Therefore, facilitating factors should be supported while taking preventive factors under control.⁴ The postpartum period is a developmental transition period, especially in the first week of physiological and psychological aspects.² The prolonged time that the mother and the infant spend together, which is among the factors facilitating the transition to motherhood, may cause attachment and adaptation to the parenting role to increase while causing the risk of depression to decrease.

A history of depression has been reported to be an essential risk factor for postpartum depression in the literature.^{18,23,24} In our study, it was found that the risk of postpartum depression increased by 1.81 times in women with a history of depression. The results of this study also show similarities with the findings in the literature.

The risk of postpartum depression increases by 0.28 times in women who think that their spouses do not provide support. Meleis emphasizes that social support is vital for supporting a healthy transition. The most important social support is spousal support, and it is crucial for facilitating the transition process.⁴ In the literature, it is reported that spousal support affects the health of the mother and the infant positively, that women stating that they do not receive enough interest and spousal support and experience problems in marital relations are at higher risk of postpartum depression.^{18,25} Our results are similar to the results in the literature.

5 | CONCLUSION

In over-interventionist Turkish culture, having an infant in the period of growth spurts and being at the risk of postpartum depression may

lead to breastfeeding problems and inadequacies in maintaining breastfeeding.

6 | IMPLICATIONS FOR NURSING PRACTICE

The awareness of cultural factors and presenting a holistic approach are essential in providing lactation care. Despite a good start to breastfeeding, there are inadequacies in maintaining breastfeeding due to some beliefs in Turkish culture. These widespread beliefs may cause women to be exposed to excessive external interventions to the extent to which the natural adaptation process will be impeded during the transition to motherhood. In order for mothers to experience a healthy transition, it is crucial to control problems related to breastfeeding and to support factors facilitating the transition. Postpartum depression is one of the primary inadequacies in maintaining breastfeeding during the transition to motherhood. In our study, it was determined that women who were at risk of postpartum depression and who had infants in the period of growth spurts experienced more breastfeeding problems. To solve the problem of maintaining breastfeeding, it is recommended to determine mothers' mood changes and breastfeeding problems experienced on the first postpartum days, to evaluate them in terms of risk factors, and to provide counseling. It is thought that the protection of the mother and infant from over-interventionist cultural practices during the postpartum adaptation process and the breastfeeding support provided at the first postpartum weeks will reduce the risk of depression. To ensure the long-term continuity of breastfeeding in society, it is recommended to identify risk groups and to provide more breastfeeding support to these groups, with the awareness of the risk factors revealed in our study.

CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

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