

Original Article

The Relationship Between Breastfeeding Self-Efficacy and Depression in the Early Postpartum Period in Turkey

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Correspondence: Berrak Mizrak Sahin, Eskisehir Osmangazi University, Faculty of Health Sciences, Nursing Department, Meselik Campus, 26480 Eskisehir, Turkey. E-mail: bmizrak5@hotmail.com**Abstract****Background:** Breastfeeding self-efficacy perception is an important factor that increases mother's breastfeeding success and duration. While the emergence of positive situations such as satisfaction or excitement increases self-efficacy; adverse events such as fatigue, pain, anxiety or depression reduce self-efficacy perception.**Objectives:** In our study, the relationship between mother's postnatal depression risk status and breastfeeding self-efficacy was evaluated. In addition, the effect of maternal socio-demographic characteristics and obstetric properties on postpartum depression risk status was determined.**Methodology:** This research was intended to be performed on a sample size of 357 mothers. Research volunteers completed the Postnatal Questionnaire, Breastfeeding Self-Efficacy and Edinburgh Postpartum Depression Scale. According to the total score of the EPDS, mothers whose EPDS scores were 12 or more classified as a risk group and to be referred to relevant units.**Results:** Mothers whose EPDS scores were 12 or more classified as a risk group and prevalence was found to be 20.2%. In our study, it was determined that women with higher breastfeeding self-efficacy scores had lower rates of depression. There was no significant relationship between educational and occupational status, number of children, type of birth, gender of the baby, and depression levels of mothers. Mothers who did not have social support ($p=.021$), evaluating the income level as bad ($p=.015$), unplanned pregnancy ($p<.001$), and smoking during pregnancy ($p=.038$) were found to have a high risk of depression.**Conclusions:** It is important that the mother who has low breastfeeding self-efficacy level is evaluated by the health professional for postnatal depression.**Key words:** Breastfeeding, breastfeeding self-efficacy, early postpartum period, postpartum depression.**Introduction**

Breastfeeding alone is one of the most effective ways to reduce infant mortality (Kolanen et al., 2016; Verma, Barnabas, & Victor, 2015). In low-income countries it is known that breastfeeding alone reduces deaths by 13% in children under the age of 5 (Jones et al., 2003). Due to the benefits of human milk, the World Health Organization (WHO, 2001) have recommended that mothers exclusively breastfeed their infants for the first 6 months of life, with the addition of complementary nutrition at 6 months to 2 years. In the world and Turkey, exclusively breastfeeding duration is still not at the desired level especially in later months after birth. According to the Turkey Demographic and Health Survey (TDHS) (2013), almost all children (97%) were breastfed for a certain

period of time whereas the rate of exclusively breastfeeding for the first 6 months is 30.1% (TNSA, 2013). In Portugal, between 2010 and 2011, exclusively breastfeeding rates were reported between 65.2% to 72.5% by the time of hospital discharge, it decreased to 40.3% in the fifth postpartum period. Similarly, in Brazil, exclusively breastfeeding rate was 41% in the first 6 months in 2008 (Figueiredo, Canário, & Field, 2014). There are several factors that influence when a mother starts breastfeeding, breastfeeding duration and the decision to continue breastfeeding. These factors include the following: mother's age, education, socioeconomic status and support resources (Dennis, 2002; Keloglan, Yilmaz, & Gumus, 2018; Taveras et al., 2003; Wambach et al., 2005). Furthermore, positive attitudes and beliefs towards breastfeeding (Dennis, 2002; Wambach

et al., 2005); mother rooming-in with her baby; and hospital policies (Demirtas, 2012), affect breastfeeding initiation and duration. Breastfeeding self-efficacy is another important factor that affects breastfeeding (Blyth et al., 2002; Chezem, Friesen, & Boettcher, 2003; Dennis & Faux, 1999; Swanson et al., 2012). Breastfeeding self-efficacy and confidence have been used synonymously. Incorporating Bandura's social cognitive theory, Dennis (1999) developed the breastfeeding self-efficacy theory. Breastfeeding self-efficacy perception is an important factor that increases mother's breastfeeding success and duration. Mothers with low breastfeeding self-efficacy give up breastfeeding much sooner than the recommended time; however, mothers with high breastfeeding self-efficacy have fewer difficulties with breastfeeding initiation and continuation (Dennis & Faux, 1999). In studies, it was found that mothers with a high breastfeeding self-efficacy perception were more likely to continue breastfeeding and that their babies had exclusively breastfeeding during the first 6 months (Hatamleh, 2006; Pollard, 2011; Wilhelm, Flanders Stepan, Hertzog, Callahan Rodehorst, & Gardner, 2006). While the emergence of positive situations such as satisfaction or excitement increases self-efficacy; adverse events such as fatigue, pain, anxiety or depression reduce self-efficacy perception. Anxiety, depression and pain inhibition of the hormone oxytocin, may lead to reduced milk-ejection reflex and insufficient milk syndrome (Mizrak, Ozerdogan, & Colak, 2017). However, most of the mothers may experience stress, anxiety and depressive symptoms in the postpartum period (Zubaran & Foresti, 2013). Postpartum depression is defined as a widespread and serious emotional disorder that occurs at any time during the year following birth (Dönmez & Bükülmez, 2015; Alexandrou, Sakellari, Kourakos, & Sapountzi-Krepia, 2018). Factors such as previously defined psychiatric disease, the stress experienced in recent times, young age, poor marital relationships, weak social support, infertility, previous pregnancy loss, pregnancy and birth problems are involved the etiology of postpartum depression (Abuchaim, Caldeira, Lucca, Varela, & Silva, 2016; Sünter, Güz, Canbaz, & Dündar, 2006). Postpartum depression has an adverse effect on hormones that act on lactation by inhibiting the ability of women to perform maternal functions (Abuchaim et al., 2016). Studies have shown that

mothers with high levels of depression postpartum have low breastfeeding success and short breastfeeding duration (C.-L. Dennis & McQueen, 2009; Figueiredo et al., 2014; Green, Broome, & Mirabella, 2006). Postpartum depression negatively affects mother's breastfeeding motivation, intention and self-efficacy (Adedinsewo et al., 2014). Mothers with high levels of postpartum depression also have low breastfeeding self-efficacy. For this reason, it is important to determine postpartum depression which is the most significant factor affecting breastfeeding self-efficacy and continuing breastfeeding and factors affecting the development of depression. There is no detailed study evaluation of the relationship between breastfeeding self-efficacy and postpartum depression and the factors affecting postpartum depression in the literature. In our study, the relationship between mother's postnatal depression risk status and breastfeeding self-efficacy was evaluated. In addition, the effect of maternal socio-demographic characteristics and obstetric properties on postpartum depression risk status was determined.

Methodology

Design and Sample: This study was conducted as an descriptive study and carried out in postpartum services in the state hospital of Eskisehir. The data were collected between 15 May and 26 September 2018. The study universe consisted of 6086 individuals who gave birth at the hospital in 2017. This research was intended to be performed on a sample size of 357 mothers (95% confidence interval). The study sample consisted of primiparous and multiparous mothers who (1) were older than 18 years of age, (2) had no communication problems, (3) breastfeed their infants after birth, (4) had singular babies, and (5) had not been diagnosed psychiatric problems.

Data Collection Tools

Postnatal Questionnaire: Postnatal questionnaire was developed by the researcher to determine the socio-demographic characteristics, obstetric properties, labour process and breastfeeding status of women.

Breastfeeding Self-Efficacy Scale (BSES): The Breastfeeding Self Efficacy Scale-Short Form (BSES-SF) is a 14-item, self-reporting instrument developed to measure breastfeeding self-efficacy. The BSES is an ordinal scale in

which all items are preceded by the phrase “I can always” and anchored with a 5-point Likert-type scale where 1 indicates not at all confident and 5 indicates always confident. All items are presented positively, and scores are summed to produce a range from 14 to 70, with higher scores indicating higher levels of breastfeeding self-efficacy (C. L. Dennis, 2003). The validity and reliability of the Turkish version made by Tokat in 2009 and Cronbach's α were 0.86 (Alus Tokat, Okumus, & Dennis, 2010).

Edinburgh Postpartum Depression Scale (EPDS): Edinburgh Postpartum Depression Scale (EPDS) is a type of self-rating scale prepared by Cox et al. (1987) in England in order to determine the depression risk of women during the postpartum period. The scale had 10 questions in total, and each question had 4 sub-questions with values between 0 and 3 (Cox, Holden, & Sagovsky, 1987). The Turkish validity and reliability of the scale was achieved by Engindeniz (1996); the internal consistency coefficient was designated as 0.79 by Engindeniz. The cut-off point of the EPDS was calculated as 12, and women who had a scale score of 12 or more were considered a risk group for depression (Engindeniz, 1996).

Data Collection: Mothers who stay in the hospital and satisfied the sampling criteria were included in the study through random sampling. Participants were informed about the aim of the survey, and their verbal informed consent was obtained before the study started. Data collection tools were given to the participants by the researchers during face-to-face interviews. The duration of the application lasted approximately 20-25 minutes. Immediately after the implementation of the data collection instruments, the total score of the 'Edinburgh Postpartum Depression Scale' was calculated. According to the total score of the EPDS, mothers whose EPDS scores were 12 or more classified as a risk group and to be referred to relevant units.

Statistical analysis: The data obtained from the study were evaluated by the IBM SPSS 21.0 program. All variables were calculated as percentages and quantitative variables were calculated as the mean standard deviation. Mann-Whitney U-test was performed for comparison of EPDS and BSES-SF scores. Statistical significance was accepted as $p < 0.05$.

Ethical Approval: This study was approved by the Eskisehir Osmangazi University, Faculty of Medicine, Ethical Committee of Non-drug Clinical Research (2018-08) and written permission were obtained from the hospital.

Results

The mean age of the mothers 27.17 ± 5.12 (min:19,max:44). A total of 159 (44.5%) participants had under high school, 286 (80.1%) were not working. A large part of the pregnancy was planned, 61.3% had delivered by cesarean section and 54.3% of the gender of the baby male.

Approximately half of the mothers were able to breastfeed their baby within the first half hour after birth, and 39.8% of them reported receiving education about breastfeeding (Table 1).

Table 2 presents the mean BSES-SF and EPDS scores of mothers. The mean BSES-SF score of the sample was 56.41 ± 8.97 . According to the total score of the EPDS, mothers whose EPDS scores were 12 or more classified as a risk group. 72 of mothers (20.2 %) are at higher risk for depression. When the distribution of the Breastfeeding Self-efficacy Scale scores were examined according to the depression risk status, it was determined that women with depression risk had low breastfeeding self-efficacy scores (Table 3).

The depression levels of mothers and the relationship between their socio-demographic and obstetric characteristics are shown in Table 4. There was no significant relationship between educational and occupational status, number of children, type of birth and gender of the baby, and depression levels of mothers. Mothers who did not have social support ($p = .021$), evaluating the income level as bad ($p = .015$), unplanned pregnancy ($p < .001$), and smoking during pregnancy ($p = .038$) were found to have a high risk of depression.

Discussion

Postpartum depression has a negative effect on hormones that play a role in lactation, inhibiting the ability of women to fulfill maternal functions (Erkal et al., 2016). Prevalence of psychiatric disorders affecting women in postpartum period ranges from 13% to 19% in developed countries (Abuchaim et al., 2016; Figueiredo et al., 2014). Reasons such as; differences in the measurement tools which were used in studies to determine the

prevalence of postnatal depression and evaluations which were made at different times during the postpartum period, caused to find different prevalence values. The prevalence of depression was between 22.47% and 39% in

international studies in which the cut-off value of the EPDS scale is accepted as 11/12 (Abuchaim et al., 2016; Ruschi et al., 2007; Zubaran & Foresti, 2013).

Table 1. Socio-demographic and obstetric characteristics of mothers (n=357)

Socio-demographic and obstetric characteristics	n	%
The Number of Births		
First	178	49.9
Second	179	50.1
Educational status		
Primary school	71	19.9
Secondary school	88	24.6
High school	133	37.3
University	65	18.2
Occupational status		
Working	286	80.1
Not working	71	19.9
Income Level		
Bad	41	11.5
Moderate	246	68.9
Good	70	19.6
Pregnancy planning status		
Planned	325	91.0
Not planned	32	9.0
Smoking during pregnancy		
Yes	36	10.1
No	321	89.9
Type of birth		
Vaginal	138	38.7
Cesarean	219	61.3
Gender of the baby		
Female	163	45.7
Male	194	54.3
Breastfeeding training		
Yes	142	39.8
No	215	60.2

Table 2. EPDS and BSES-SF Levels of Mothers

EPDS and BSES-SF Levels of Mothers	Mean±SD	
The average BSES-SF score	56.41±8.97	
The average EPDS score	7.43±5.22	
Postpartum depression risk status of mothers		
There is a depression risk	n	%
There is no depression risk	72	20.2
	285	79.8

The depression risk is defined as having a score ≥ 12

Table 3. Comparison of breastfeeding self-efficacy (BSES-SF) scores according to depressive symptomatology

EPDS	BSES-SF		
	Mean \pm SD Median (25–75) Percentile	Z*	Significance (p)
There is a depression risk (n=72)	51.69 \pm 10.11 53 (47-56)	-4.512	<.001
There is no depression risk (n=285)	57.42 \pm 8.39 58 (53-64)		

EPDS = Edinburgh Postnatal Depression Scale; BSES-SF = Breastfeeding Self-Efficacy Scale-Short-Form. *Mann-Whitney U Test

Table 4. The depression levels of mothers and the relationship between their socio-demographic and obstetric characteristics

Socio-demographic and obstetric characteristics	There is a depression risk (≥ 12) (n=72)	There is no depression risk (<12) (n=285)	Statistical Analysis p
Educational Status***			
Primary School	20 (28.2)	51 (71.8)	.199
Middle School	16 (18.2)	72 (81.8)	
High School	27 (20.3)	106 (79.7)	
University	9 (13.8)	56 (86.2)	
Occupational Status*			
Working	61 (21.3)	225 (68.7)	.323
Not working	11 (15.5)	60 (84.5)	
Income Level***			
Bad	15 (36.6)	26 (63.4)	.015
Moderate	42 (17.1)	204 (82.9)	
Good	15 (21.4)	55 (78.6)	
Number of children*			
1	32 (18.0)	146 (82.0)	.356
2 and above	40 (22.3)	139 (77.7)	
Planned pregnancy*			
Yes	57 (17.5)	268 (82.5)	<.001
No	15 (46.9)	17 (53.1)	
Type of birth**			
Vaginal birth	31 (22.5)	107 (77.5)	.470
Caesarean birth	41 (18.7)	178 (81.3)	
Gender of the baby**			
Female	29 (17.8)	134 (82.2)	.354
Male	43 (22.2)	151 (77.8)	
Presence of supporting systems*			
Yes	53 (17.8)	244 (82.2)	.021
No	19 (31.7)	41 (68.3)	
Smoke during pregnancy**			
Yes	12 (33.3)	24 (66.7)	.038
No	60 (18.7)	261(81.3)	

*Fisher's Exact Test ** Continuity Correction *** Pearson Chi-Square

Prevalence of depression ranges from 15% to 31.7% in studies carried out in Turkey (Durukan, İlhan, Bumin, & Aycan, 2014; Erkal et al., 2016; Özkan, Üst, Gündoğdu, Capık, & Sahin, 2014; Sünter et al., 2006). In our study, according to the total score of the EPDS, mothers whose EPDS scores were 12 or more classified as a risk group and prevalence was found to be 20.2%. In our study, it was determined that women with higher breastfeeding self-efficacy scores had lower rates of depression. Similarly, Zubaran and Foresti (2013) examined the relationship between breastfeeding self-efficacy perceptions and depression levels of mothers at 2 and 12 weeks and they found that mothers with low levels of depression had higher breastfeeding self-efficacy perception scores (Zubaran & Foresti, 2013). There are number of studies in the literature have shown that mothers who show higher levels of breastfeeding self-efficacy present lower levels of postpartum depression symptoms (Abuchaim et al., 2016; Aslan & Ege, 2016; Erkal et al., 2016; Haga et al., 2012; Kucukoglu, Celebioglu, & Coskun, 2014). Results indicate that early detection of maternal depressive symptoms is not only necessary to reduce postpartum depression-related morbidity, but also to increase breastfeeding duration and support breastfeeding (C. L. Dennis & McQueen, 2007). Depression story, family depression story, negative life events, negative marital relationship, low social support levels, being single or young mother, previous pregnancy loss, pregnancy and birth problems, some baby characteristics are risk factors for postpartum depression (Abuchaim et al., 2016; Haga et al., 2012). These risk factors may partially explain the development of PPD. Hence, there is a need to explore other potential factors that may put new mothers at an increased risk for PPD, and to develop a deeper understanding of some of the established risk factors.

In our study, while there is no relation between the education and working status of the mothers and postpartum depression risk situations, assessment of the economic situation as bad increases the risk of depression. The economic situation has great impact on mental disorders, including major depressive disorder and anxiety. For example, employment status and personal income are associated with major depressive disorder. There are many studies showing a negative relationship between economic status and postpartum depression (Chang et al., 2016;

Khooharo et al., 2010; Salem, Thabet, Fouly, & Abbas, 2017). Providing support for mothers in caring for their infants in the postnatal period is an important concern for nurses and midwives, because social support can facilitate women's transition to motherhood (Leahy-Warren, McCarthy, & Corcoran, 2012). An important finding in the Leahy-Warren et al.'s study, it has been the importance of family support that increased postpartum maternal self-efficacy and affected mother's mental health positively. The effect of social support on postpartum depression is explained by Bandura's Self-efficacy theory in the study. According to this theory, the support of the individual to succeed in a behavior by the environment has affect the self-sufficiency of the person to achieve the behavior positively and the increase of self-sufficiency contributes to the positive psychological state. Smokers generally consist of young women who have a low education level, an unplanned pregnancy, an insufficient social support and a high depression level (Leary et al., 2006). In our study, although the number of mothers who smoking during pregnancy is low, the risk of depression was higher in these women. In a study of postpartum depression and related factors in Nepal similar to our study it was determined that smoking mothers have more depressive symptoms (Dorheim Ho-Yen, Tschudi Bondevik, Eberhard-Gran, & Bjorvatn, 2007). Breslau et al. found that depression is a reason to increase the tendency to smoke but prolonged smoking increases susceptibility to depression and anxiety (Breslau, Peterson, Schultz, Chilcoat, & Andreski, 1998). There was no significant difference between the gender of the baby and postpartum risk status of the mothers in our study. The effect of religious and cultural structure is increasing increases the male infant preference in Turkey. Son preference is closely associated with economic reasons for the family as a future security assurance, continuity of paternal lineage, when a woman gives birth to a boy belief that status will rise. Some studies done in Turkey, it was determined that mother preferred a male child especially and the baby girl increased the levels of depression and anxiety in the mothers (Ekuklu, Tokuc, Eskiocak, Berberoglu, & Saltik, 2004; Erdem, 2010). In our study, it is an important finding for us that the gender of the baby does not affect the depression status of the mothers.

Conclusion

It has been determined that mothers with a high risk of postpartum depression breastfeeding self-efficacy is inadequate. In addition, some socio-demographic and obstetric factors associated with depression risk have been evaluated. It is important that the mother who has low breastfeeding self-efficacy level is evaluated by the health personnel for postnatal depression.

References

- Abuchaim, E. d. S. V., Caldeira, N. T., Lucca, M. M. D., Varela, M., & Silva, I. A. (2016). Postpartum depression and maternal self-efficacy for breastfeeding: prevalence and association. *Acta Paulista de Enfermagem*, 29(6), 664-670.
- Adedinsowo, D. A., Fleming, A. S., Steiner, M., Meaney, M. J., Girard, A. W., & team, M. (2014). Maternal anxiety and breastfeeding: findings from the MAVAN (Maternal Adversity, Vulnerability and Neurodevelopment) Study. *Journal of Human Lactation*, 30(1), 102-109.
- Alexandrou, F., Sakellari, E., Kourakos, M., & Sapountzi-Krepia, D. (2018). Health visitors' perceptions on their role to assess and manage postpartum depression cases in the community. *Health & Social Care in the Community*, 26(6), 995-1000.
- Alus Tokat, M., Okumus, H., & Dennis, C.-L. (2010). Translation and psychometric assessment of the Breast-feeding Self-Efficacy Scale—Short Form among pregnant and postnatal women in Turkey. *Midwifery*, 26(1), 101-108.
- Aslan, Y., & Ege, E. (2016). Breastfeeding self-efficacy of mothers and relationship with depression risk. *Journal of Human Sciences*, 13(2), 3160-3172.
- Blyth, R., Creedy, D. K., Dennis, C. L., Moyle, W., Pratt, J., & De Vries, S. M. (2002). Effect of maternal confidence on breastfeeding duration: An application of breastfeeding self-efficacy theory. *Birth*, 29(4), 278-284.
- Breslau, N., Peterson, E. L., Schultz, L. R., Chilcoat, H. D., & Andreski, P. (1998). Major depression and stages of smoking: A longitudinal investigation. *Archives of general psychiatry*, 55(2), 161-166.
- Chang, F.-W., Lee, W.-Y., Liu, Y.-P., Yang, J.-J., Chen, S.-P., Cheng, K.-C., Lin, Y.-C., HO, T.-W., Hsu, R.-J. (2016). The relationship between economic conditions and postpartum depression in Taiwan: a nationwide population-based study. *Journal of Affective Disorders*, 204, 174-179.
- Chezem, J., Friesen, C., & Boettcher, J. (2003). Breastfeeding knowledge, breastfeeding confidence, and infant feeding plans: effects on actual feeding practices. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 32(1), 40-47.
- Cox, J. L., Holden, J. M., & Sagovsky, R. (1987). Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. *The British journal of psychiatry*, 150(6), 782-786.
- Demirtas, B. (2012). Breastfeeding support received by Turkish first-time mothers. *International Nursing Review*, 59 (3), 338-344.
- Dennis. (2002). Breastfeeding Initiation and Duration: A 1990-2000 Literature Review. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 31(1), 12-32.
- Dennis, & Faux. (1999). Development and psychometric testing of the Breastfeeding Self-Efficacy Scale. *Research in Nursing & Health*, 22(5), 399-409.
- Dennis, C.-L., & McQueen, K. (2009). The relationship between infant-feeding outcomes and postpartum depression: a qualitative systematic review. *Pediatrics*, 123(4), e736-e751.
- Dennis, C. L. (2003). The Breastfeeding Self-Efficacy Scale: Psychometric Assessment of the Short Form. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 32(6), 734-744.
- Dennis, C. L., & McQueen, K. (2007). Does maternal postpartum depressive symptomatology influence infant feeding outcomes? *Acta paediatrica*, 96(4), 590-594.
- Dorheim Ho-Yen, S., Tschudi Bondevik, G., Eberhard-Gran, M., & Bjorvatn, B. (2007). Factors associated with depressive symptoms among postnatal women in Nepal. *Acta obstetrica et gynecologica Scandinavica*, 86(3), 291-297.
- Donmez, H., & Bukulmez, A. (2015). The Effects Of Postpartum Depression On Breastfeeding. *Selcuk Tip Derg*, 31(4), 358-362.
- Durukan, E., Ilhan, M. N., Bumin, M. A., & Aycan, S. (2014). Postpartum Depression Frequency and Quality of Life Among a Group of Mothers Having a Child Aged 2 Weeks-18 Months. *Balkan Medical Journal*, 2011(4), 385-393.
- Ekuklu, G., Tokuc, B., Eskiocak, M., Berberoglu, U., & Saltik, A. (2004). Prevalence of postpartum depression in Edirne, Turkey, and related factors. *Journal of reproductive medicine*, 49(11), 908-914.
- Engindeniz, N. (1996). Validity and Reliability Study of the Turkish Postpartum Depression Scale. (Unpublished Master's Thesis), Ege University, İzmir.
- Erdem, Y. (2010). Anxiety levels of mothers whose infants have been cared for in unit level-I of a neonatal intensive care unit in Turkey. *Journal of clinical nursing*, 19(11-12), 1738-1747.
- Erkal, Y., Fatma, U., İncke, G., Gulay, C., Kubra, O., Yılmaz, T., Yıldırım, S., Yılmaz, S. D. (2016). The Effects Of Postpartum Depression On Breastfeeding. *Gumushane University Journal of Health Sciences*, 5(3), 90-96.
- Figueiredo, B., Canário, C., & Field, T. (2014). Breastfeeding is negatively affected by prenatal

- depression and reduces postpartum depression. *Psychological medicine*, 44(5), 927-936.
- Green, K., Broome, H., & Mirabella, J. (2006). Postnatal depression among mothers in the United Arab Emirates: socio-cultural and physical factors. *Psychology, health & medicine*, 11(4), 425-431.
- Haga, S. M., Ulleberg, P., Slinning, K., Kraft, P., Steen, T. B., & Staff, A. (2012). A longitudinal study of postpartum depressive symptoms: multilevel growth curve analyses of emotion regulation strategies, breastfeeding self-efficacy, and social support. *Archives of women's mental health*, 15(3), 175-184.
- Hatamleh, W. (2006). The Effect of a breast-feeding self-Efficacy intervention on Breast Feeding Self-Efficacy and Duration. University of Cincinnati.
- Jones, G., Steketee, R. W., Black, R. E., Bhutta, Z. A., Morris, S. S., & Group, B. C. S. S. (2003). How many child deaths can we prevent this year? *The lancet*, 362(9377), 65-71.
- Keloglan, S., Yilmaz, A., & Gumus, K. (2018). Factors Affecting Mothers' Breastfeeding. *International Journal of Caring Sciences*, 11(1), 225-230.
- Khooharo, Y., Majeed, T., Das, C., Majeed, N., Majeed, N., & Choudhry, A. M. (2010). Associated risk factors for postpartum depression presenting at a teaching hospital. *Annals of King Edward Medical University*, 16(2), 87-87.
- Kolanen, H., Välimäki, T., Vehviläinen-Julkunen, K. (2016). Breastfeeding Among Somali Mother's Living in Finland Under Salutogenic Approach. *International Journal of Caring Sciences*, 9, 384-392.
- Kucukoglu, S., Celebioglu, A., & Coskun, D. (2014). Determination of the postpartum depression symptoms and breastfeeding self-efficacy of the mothers who have their babies hospitalized in newborn clinic. *Gumushane University Journal of Health Sciences*, 3(3), 921-932.
- Leahy-Warren, P., McCarthy, G., & Corcoran, P. (2012). First-time mothers: social support, maternal parental self-efficacy and postnatal depression. *Journal of clinical nursing*, 21(3-4), 388-397.
- Leary, S. D., Smith, G. D., Rogers, I. S., Reilly, J. J., Wells, J. C., & Ness, A. R. (2006). Smoking during pregnancy and offspring fat and lean mass in childhood. *Obesity*, 14(12), 2284-2293.
- Mizrak, B., Ozerdogan, N., & Colak, E. (2017). The Effect of Antenatal Education on Breastfeeding Self-Efficacy: Primiparous Women in Turkey. *International Journal of Caring Sciences*, 10(1), 503.
- Ozkan, H., Ust, Z. D., Gundogdu, G., Capık, A., & Sahin, S. A. (2014). The relationship between breast feeding and depression in the early postpartum period. *Medical Bulletin of Sisli Etfal Hospital*, 48(2), 125-132.
- Pollard, D. L. (2011). Impact of a feeding log on breastfeeding duration and exclusivity. *Maternal and child health journal*, 15(3), 395-400.
- Ruschi, G. E. C., Sun, S. Y., Mattar, R., Chambô Filho, A., Zandonade, E., & Lima, V. J. d. (2007). Postpartum depression epidemiology in a Brazilian sample. *Revista de Psiquiatria do Rio Grande do Sul*, 29(3), 274-280.
- Salem, M. N., Thabet, M. N., Fouly, H., & Abbas, A. M. (2017). Factors affecting the occurrence of postpartum depression among puerperal women in Sohag city, Egypt. *Proceedings in Obstetrics and Gynecology*, 7(1), 1-10.
- Sunter, A. T., Guz, H., Canbaz, S., & Dundar, C. (2006). Postpartum Depression in Turkey: Prevalence and Related Factors. *Journal of Post-Expertise Education and Current Developments*, 3(1), 26-31.
- Swanson, V., Nicol, H., McInnes, R., Cheyne, H., Mactier, H., & Callander, E. (2012). Developing Maternal Self-Efficacy for Feeding Preterm Babies in the Neonatal Unit. *Qualitative Health Research*, 22(10), 1369-1382.
- Taveras, E. M., Capra, A. M., Braveman, P. A., Jensvold, N. G., Escobar, G. J., & Lieu, T. A. (2003). Clinician support and psychosocial risk factors associated with breastfeeding discontinuation. *Pediatrics*, 112(1), 108-115.
- TNSA. (2013). Turkey Demographic and Health Survey. Access date 27.05.2017.
- Verma, V., Barnabas, S., & Victor, B. (2015). Assessment of the General Breastfeeding Practices of Postnatal Mothers. *International Journal of Caring Sciences*, 8(3), 641.
- Wambach, K., Campbell, S. H., Gill, S. L., Dodgson, J. E., Abiona, T. C., & Heinig, M. J. (2005). Clinical lactation practice: 20 years of evidence. *Journal of Human Lactation*, 21(3), 245-258.
- WHO. (2001). The optimal duration of exclusive breastfeeding. A systematic review. Geneva WHO.
- Wilhelm, S. L., Flanders Stepan, M. B., Hertzog, M., Callahan Rodehorst, T. K., & Gardner, P. (2006). Motivational interviewing to promote sustained breastfeeding. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 35(3), 340-348.
- Zubaran, C., & Foresti, K. (2013). The correlation between breastfeeding self-efficacy and maternal postpartum depression in southern Brazil. *Sexual & Reproductive Healthcare*, 4(1), 9-15.