The Relationship of Emotional Intelligence and Breastfeeding Self-Efficacy in Mothers in the Early Postpartum Period

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Abstract

Introduction: Women have widespread breastfeeding problems in postpartum period. Emotional intelligence (EI) is thought to be important in problem-solving related to breastfeeding.

Research Aims: The study was conducted to investigate the correlation between the EI and breastfeeding selfefficacy (BFSE) of women in the early postpartum period and the associated factors.

Materials and Methods: A cross-sectional study was conducted in cesarean-postpartum service of a hospital in Erzurum between May 2015 and May 2016. The sample of the study consisted of 271 women. The dependent variables constituted the EI and BFSE mean scores. Descriptive statistics, independent samples t tests, one-way analysis of variance, Kruskal-Wallis test, Mann-Whitney U test, and Pearson correlation analysis were used. **Results:** The age, education level, perceived income status, and the status of planned pregnancy of the mothers affected their EI mean score, whereas their residence place, income status, the number of pregnancy and living children, and status of receiving prenatal care affected their BFSE levels. No significant correlation was found between the EI and BFSE mean scores in the early postpartum period (r=0.77, p=0.207).

Conclusions: No significant correlation was determined between the EI and BFSE in the early postpartum period.

Keywords: postpartum period, emotional intelligence, breastfeeding self-efficacy

Introduction

In the first 6 months of life, breast milk is capable of meeting all the needs of the baby. Afterward, breastfeeding should continue for at least 2 years with additional nutrients.^{1,2} Only 41% of babies 0–6 months of age are breastfed according to World Nutrition report published in 2014.³ According to UNICEF report, the breastfeeding rate is reported to be only 38% worldwide. ⁴ Although the proportion of infants fed with breast milk is quite high in our country (96%), breastfeeding rate is only 58% in the first 2 months of life and 10% in 4–5 months.⁵

Breastfeeding self-efficacy (BFSE) is the mother's proficiency in breastfeeding. BFSE perception of the mother covers whether she will breastfeed or not, how much effort she will make for that, her thoughts about breastfeeding, and her ability to cope with the difficulties she faces emotionally during the breastfeeding period.⁶ A significant proportion of mothers (24.5%) were found to have breastfeeding problems according to a systematic review of 6,736 parents in our country. The health care professionals and support given by them may reduce these problems.⁸ It is reported that selfefficacy enhancing strategies may significantly influence BFSE. 9-11 Therefore, it is important for nurses and midwives to strengthen the mothers' BFSE perceptions to increase their breastfeeding success.

Emotional intelligence (EI) enables people to understand and manage their own emotions, to understand others' emotions, to empathize, and develop motivation and the feeling of self-confidence. ^{12,13} EI includes motivation, creativity, and performance skills and provides the ability to insist in difficulty situations. 12,14

During the lactation period, the healthy growth and development of the infant and the effectiveness of the correlation between the mother and the infant depends on the success of breastfeeding. It is reported that women have

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2 KARAKOÇ ET AL.

widespread breastfeeding problems in postpartum period, but the approaches to solve these problems are limited. EI is thought to be important for problem solving. When the literature is examined, there is no study investigating the effect of EI on breastfeeding problems.

Objectives

This study was conducted to investigate the correlation between the EI and BFSE of the mothers in the early postpartum period and the associated factors. The research questions were as follows:

- What are the EI and the BFSE levels of the mothers in the early postpartum period?
- What are the variables affecting the EI and the BFSE levels?
- Is there a correlation between the EI and BFSE in the early postpartum period?

Materials and Methods

Type of research

The study was planned as a descriptive and cross-sectional study.

Population and sample of the study

The sample size included 271 mothers with a statistical power of 90%, and confidence interval of 0.95 using the data of Aslan and Ege $(n=265, \text{mean}\pm\text{standard} \text{ deviation}]$ [SD]=58.92±7.614)¹⁵ with the G* Power 3.1.5 program. The reasons of selecting these time periods are that the problems related to breastfeeding are experienced mostly in the early postpartum period.⁶

Data collection tools

The data were collected using a personal Information form, an Emotional Intelligence Evaluation Scale (EIES), and a BFSE scale. The data were collected by face-to-face interview before women were discharged from the hospital. The inclusion criteria were as follows: giving birth to a single and healthy child, giving birth in 37 weeks of gestation and above, and breastfeeding. Mothers with any disease needing long-term medications were not included in the study.

The personal information form included questions about mothers' age, education level, working status, place of residence, and income status, and questions about the number of pregnancies and number of living children, having a planned pregnancy, receiving prenatal care, mode of delivery, the first breastfeeding time, receiving any information about breastfeeding, and her spouse's attitude toward breastfeeding.

The EIES contains five 6-item subscales including "Awareness of Emotions," "Management of Emotions," "Self-Motivation," "Empathy," and "Social Skills." All items are scored in a 6-point Likert-type scale from "I completely disagree" (= 1) to "I completely agree" (= 6). The lowest score of the scale is 30 and the highest is 180. The high score signifies a high EI. ¹⁶ The validity and reliability of the Turkish scale have already been assessed, ¹⁶ and the Cronbach's alpha coefficient was 0.84.

The BFSE scale¹⁷ contains 14 items and all items are scored on a 5-point Likert type scale from "I am not quite

sure" (=1) to "I definitely sure" (=5). The lowest score is 14 and the highest score is 70. A higher score signifies a higher BFSE. The validity and reliability of the Turkish scale have already been assessed, ¹⁸ and its Cronbach's alpha value was 0.86.

Data collection

The data were collected before the discharge within the first 24–48 hours in cesarean/postpartum services. The reasons for selecting these time period are that the problems related to breastfeeding are experienced mostly in the early postpartum period.⁶ It took 20 minutes including 5 minutes for personal information form and 15 minutes for the scales to conduct the interviews for each mother.

Statistical analysis

All statistical analyses were performed using IBM SPSS Statistics, version 21 (IBM, Inc., Armonk, NY). Descriptive statistics (i.e., mean, SD, and percentage) were calculated for demographic characteristics. To determine the correlation between the dependent and independent variables, independent samples t test, one-way analysis of variance, Kruskal–Wallis, Mann–Whitney U, and Pearson correlation analyses were used. Statistical significance was accepted as p < 0.05.

Ethical considerations of the study

Before the investigation, approval from the ethics committee (dated May 28, 2015, approval no. 2015/09) and hospital permit were obtained. Before starting data collection, women were informed about the study, and their questions were answered. Informed consent was obtained verbally. All procedures were conducted in accordance with the ethical standards of the institutional and/or national research committee and the 1964 Declaration of Helsinki and its later amendments.

Results

Majority of the participants (42.8%) were in the age group of 24–29 years, 52.8% were primary school graduates, and 53.9% were residing in the city. Moreover, 72.7% of the mothers had an income equal to their expenses. About 27.7% of them had their second pregnancy, 77.7% had a planned pregnancy, and 59.8% breastfed their infants within the first hour. Totally, 54.6% of the mothers had received information about breastfeeding, 50.9% received these information from midwives and nurses, 67.2% fed their infants only with breast milk, and husbands of 90.4% supported breastfeeding.

The mothers' minimum and maximum EI scores were 50 and 173, respectively, and their total mean score was 136.00 ± 16.77 . Their minimum and maximum BFSE scores were 33 and 70, respectively, and their total mean score was 53.32 ± 7.83 .

The mean EI scores were significantly different in mothers with different age groups (p=0.027), education level (p=0.001), and income status (p=0.014). The mothers' mean EI increased as their age and income level increased. Working status and the place of residence did not affect the EI mean scores (Table 1).

The mean EI scores were also significantly higher in mothers with a planned pregnancy (p = 0.045). However,

Table 1. Emotional Intelligence Score Averages According to Sociodemographic Characteristics of Mothers

Sociodemographic characteristics	n (%)	Mean ± SD	p-value
Age group, years			
18–23	68 (25.0)	131.12 ± 19.41	0.027*
24–29	116 (42.8)	138.84 ± 16.66	
30–34	50 (18.5)	136.34 ± 12.85	
35 and above	37 (13.7)		
Education			
Primary school	143 (52.8)	133.68 ± 16.92	$\boldsymbol{0.001}^{\dagger}$
Secondary school	75 (27.6)	136.28 ± 15.73	
High school	40 (14.8)	140.05 ± 16.11	
University	13 (4.8)	147.54 ± 17.49	
Working status			
Employed	15 (5.5)	137.40 ± 15.93	0.518^{\ddagger}
Unemployed	256 (94.5)	135.92 ± 16.84	
Place of residence	, ,		
Village	55 (20.3)	134.95 ± 14.17	0.707*
District	70 (25.8)	135.20 ± 12.45	
Province	146 (53.9)	136.79 ± 19.33	
Perception of income	· · · · ·		
Less income	43 (15.9)	129.26 ± 19.78	0.014*
than expense	.6 (10.5)	127.20 = 17170	0,01.
Equal income	197 (72.7)	137.07 ± 15.99	
and expense	(, , , ,		
More income	31 (11.4)	138.58 ± 15.27	
than expense	• /		
-			

Bold values indicate a statistically significant difference.

number of pregnancy, number of living children, status of receiving prenatal care, mode of delivery, the first breast-feeding time, receiving information about breastfeeding, and spouses' attitude about breastfeeding did not significantly affect the EI mean scores (Table 2).

The mean BFSE scores were significantly different in mothers with different residence place (p=0.002) and income status (p=0.012). However, the mothers' age group, education level, and working status did not significantly affect the BFSE mean score (Table 3). Moreover, the mean BFSE scores were significantly different in mothers with different status regarding the numbers of pregnancies (p<0.001), numbers of living children (p<0.001), and receiving prenatal care (p<0.001). However, the mothers' mode of delivery (p=0.371), first breastfeeding time (p=0.675), status of receiving information (p=0.939), perceived spouses' attitude (p=0.942) did not significantly affect their mean BFSE score (Table 4). Receiving prenatal care and feeding the baby only with breast milk increased the mothers' BFSE mean score.

There was no significant correlation between the EI and the BFSE mean scores in the early postpartum period (r = 0.77, p = 0.207).

Discussion

In this study, the mean EI was 136. This finding was similar to the results of an earlier study¹⁹ in which the mean

Table 2. Emotional Intelligence Score Averages According to Comparison of the Obstetric Features of Mothers

Obstetrical			
characteristics	n (%)	$Mean \pm SD$	p-value
Number of pregnanc	ies		
1	74 (27.3)	136.43 ± 19.15	0.670*
2 3	75 (27.7)	135.77 ± 14.44	
3	52 (19.2)	138.04 ± 18.95	
4 and above	70 (25.8)	134.29 ± 14.73	
Number of children	living		
1	91 (33.6)	135.30 ± 20.24	0.353*
2	84 (31.0)	135.68 ± 14.84	
2 3	52 (19.2)	139.58 ± 14.98	
4	44 (16.2)	133.86 ± 13.99	
If pregnancy is being	g planned		
As planned	230 (77.7)	137.20 ± 16.45	$\boldsymbol{0.045}^{\dagger}$
Not planned	66 (22.3)	132.44 ± 17.34	
Prenatal care status			
I took care	216 (79.7)	135.72 ± 13.91	0.585^{\dagger}
I did not care	55 (20.3)	137.11 ± 25.19	0.000
Delivery type	` ,		
Vaginal	152 (56.1)	137.68 ± 16.87	0.062^{\dagger}
Caesarean	119 (43.9)	133.86 ± 16.46	0.002
First breastfeeding ti	` /	100.00 = 100	
Within the first	162 (59.8)	136.88 ± 15.81	0.297^{\dagger}
hour	102 (37.0)	150.00 ± 15.01	0.271
1 hour later	109 (40.2)	134.71 ± 18.10	
Getting information I got information		137.23 ± 16.31	0.187^{\dagger}
I did not get any	123 (45.4)		0.167
information	123 (43.4)	134.33 ± 17.20	
	-4111	461!	
The attitude of the fa			0.140†
Support	245 (90.4)		0.148^{\dagger}
No support	26 (9.6)	130.00 ± 23.27	

Bold values indicate a statistically significant difference. *One-way analysis of variance.

EI score of pregnant women was 143. The mean BFSE score of our participants was 53.32. A number of earlier studies also investigated the BFSE of mothers and reported somewhat greater mean scores ranging from 57.16 (Ref. 10) to 63.51 (Ref. 11,15,20). It has reported that mothers having a self-efficacy score <50 are risky concerning breastfeeding and should be referred for consultation regarding effective breastfeeding. Although the mothers in this study possessed a mean BFSE of >50, they might also need support and consultation about effective breastfeeding.

The mean EI score of our participants increased as their age, education, and income increased. In addition, the mean EI score of mothers with a planned pregnancy was higher than that of those with an unplanned pregnancy. However, the EI was not influenced by variables such as the number of pregnancies, number of living children, receiving prenatal care, mode of delivery, the first breastfeeding time, receiving information about breastfeeding, and the spouses' attitude about breastfeeding. EI is a concept that includes knowledge that can be learned and developed. As EI competencies develop, the individual's problem-solving ability is developing.

^{*}One-way analysis of variance.

Kruskal–Wallis test.

[‡]Mann–Whitney *U* test.

SD. standard deviation.

 $^{^{\}dagger}t$ Test.

SD, standard deviation.

4 KARAKOÇ ET AL.

Table 3. Breastfeeding Self-Sufficiency Score Averages According to Comparison of the Sociodemographic Characteristics of Mothers

OF WOTHERS				
Sociodemographic characteristics	n (%)	Mean ± SD	p-value	
	n (70)	mean ±5D	p vaine	
Age group, years				
18–23	68 (25.0)	52.06 ± 6.84	0.429*	
24–29	116 (42.8)	53.50 ± 8.36		
30–34	50 (18.5)	53.82 ± 7.79		
35 and above	37 (13.7)	54.43 ± 7.89		
Education				
Primary school	143 (52.8)	53.72 ± 7.10	0.155^{\dagger}	
Secondary school	75 (27.6)	53.95 ± 7.47	0.100	
High school	40 (14.8)	50.48 ± 9.82		
University	13 (4.8)	54.15 ± 9.65		
Working status				
Employed	15 (5.5)	52.73 ± 7.57	0.700^{\ddagger}	
Unemployed	256 (94.5)	53.36 ± 7.86	01700	
Place of residence	` ,			
Village	55 (20.3)	53.56 ± 7.60	0.002*	
District	70 (25.8)	50.60 ± 7.02	0.002	
Province	146 (53.9)	54.54 ± 8.00		
Perception of income	` '			
Less income	43 (15.9)	49.87 ± 7.83	0.012*	
than expense	(10.5)	1,7107 = 7100	01012	
Equal income	197 (72.7)	53.44 ± 7.86		
and expense	(*)			
More income	31 (11.4)	55.28 ± 6.84		
than expense	` ,			
			-	

Bold values indicate a statistically significant difference.

There are many studies examining the effect of EI on academic achievement and job performance. However, we found no study on the effect of EI on breastfeeding. Therefore, studies are needed about the effects of EI on motherhood and breastfeeding.

It was determined that the residence place and the income status affected the BFSE level. This finding is consistent with a number of earlier studies. ^{18,25} It seems that having a good economic status in the family leads the woman to feel self-confident and have higher BFSE.

It was found in the study that the mother's age did not affect the BFSE and a number of earlier studies have also reported that there is no correlation between the mother's age and the BFSE. ^{18,25–28} Similarly, it was found in the study that the mother's educational level and working status did not affect the BFSE and a number of earlier studies have also reported that there is no correlation. ^{10,26–28} The result of this study is similar to the results of the other studies.

In this study, the BFSE scores of the mothers with a higher number of pregnancies and living children were higher. In a previous study,²⁹ it has been reported that there was a statistically significant difference only with the parity status of the woman. Another study²⁶ also reported that the BFSE of mothers having risky pregnancy and staying in

Table 4. Breastfeeding Self-Sufficiency Score Averages According to Comparison of the Obstetric Features of Mothers

Obstetrical characteristics	n (%)	$Mean \pm SD$	p-value
		11100111 = 52	Р
Number of pregnanci		40.00 . 7.60	0.000
1	74 (27.3)	49.80 ± 7.60	0.000*
2 3	75 (27.7)	53.51 ± 6.61	
	52 (19.2)	56.33 ± 8.87	
4 and above	70 (25.8)	54.63 ± 7.19	
Number of children l			
1	91 (33.6)	50.49 ± 7.64	0.000*
2 3	84 (31.0)	53.48 ± 7.45	
3	52 (19.2)	57.29 ± 6.82	
4	44 (16.2)	54.20 ± 7.99	
If pregnancy is being	nlanned		
As planned	230 (77.7)	53.10 ± 7.80	0.422^{\dagger}
Not planned	66 (22.3)	53.99 ± 7.94	
Prenatal care status			
I took care	216 (20.3)	57.65 ± 9.07	0.000^{\dagger}
I did not care	55 (79.7)	57.03 ± 9.07 52.22 ± 7.09	0.000
	33 (17.1)	32.22 ± 1.07	
Delivery type	150 (56.1)	52.05 + 7.60	0.271†
Vaginal	152 (56.1)		0.371^{\dagger}
Caesarean	119 (43.9)	53.81 ± 8.01	
First breastfeeding tin			
Within the first	162 (59.8)	53.16 ± 6.90	0.675^{\dagger}
hour			
1 hour later	109 (40.2)	53.57 ± 9.06	
Getting information a	about breastfe	eding	
I got information	148 (54.6)	53.36 ± 8.15	0.939^{\dagger}
I did not get any		53.28 ± 7.45	
information	- (
The attitude of the fa	ther about bro	eastfeeding	
Support		53.30 ± 7.70	0.942^{\ddagger}
No support		53.50 ± 7.70 53.54 ± 9.10	0.342
140 support	20 (3.0)	JJ.J4 ± 7.10	

Bold values indicate a statistically significant difference.

hospital during their pregnancy were lower. In accordance with these results, it was thought that the BFSE of women who had regular health control and received prenatal care is higher.

It was determined that the BFSE score of the mothers giving only breast milk were higher and similar results were reported in the literature. ^{18,29} However, it was also found that planned pregnancy, mode of delivery, first breastfeeding time, the status of receiving information about breastfeeding, and fathers' attitude toward breastfeeding had no effect on BFSE. A number of studies have also reported that the BFSE was not affected by variables of planned pregnancy, ^{10,29} mode of delivery, ^{9,10,18,29} the status of receiving information about breastfeeding, ²⁹ and the person giving the information. ¹⁵ Although we found no connection between the first breastfeeding time, some of the studies have reported that the breastfeeding success of the mothers who started to breastfeed their infants during the postpartum first 1-hour period was high and their breastfeeding times were longer. ^{19,30} The significant difference between our finding and

^{*}One-way analysis of variance.

Kruskal–Wallis test.

^{*}Mann–Whitney *U* test.

SD, standard deviation.

^{*}One-way analysis of variance.

[†]t Test.

[‡]Mann–Whitney *U* test.

SD, standard deviation.

other studies might be attributable to the inadequate sample size or the relatively low rate of receiving information about breastfeeding (54.6%) in this study. Similar to the result determining that the father's attitude did not affect the BFSE, Aslan and Ege¹⁵ stated that the status of receiving family support about breastfeeding did not affect the BFSE score. However, in the literature, it is stated that social support system adversely affect breastfeeding.⁷ Although there is no significant difference, it is thought that support for the mother will affect breastfeeding positively.

EI is a concept that includes knowledge that can be learned and developed. As EI develops, problem-solving ability of the individual develops. To find new solutions for breast-feeding problems, the effect of EI on BFSE was examined. In the literature, we did not find any study.

In this study, there was no significant correlation between the EI and BFSE scores in the early postpartum period. Zubaran and Foresti²⁰ stated that the mothers experiencing postpartum depression had low BFSE, Dennis and McQueen³¹ reported that mothers having depressive signs especially in 4th and 8th weeks quit breastfeeding and had lower BFSE. However, Aslan and Ege¹⁵ stated that there was no significant difference between the BFSE and depression symptoms. Özkan et al.32 found in their study investigating the correlation between the breastfeeding and depression in the early postpartum period that there was no correlation between the depression and breastfeeding, Küçükoğlu et al.²⁷ stated that the postpartum depression symptoms of the mother did not affect the BFSE. It is thought that further studies are needed to examine the relationship between BFSE and personal skills, interpersonal skills, adaptation, coping with stress, and general mood status, which are the main dimensions of EI. In line with these results:

- When the literature was examined, many studies about the conditions affecting the mood, depression, breast-feeding success, and breastfeeding have been found, but no study was found investigating the correlation between EI and BFSE.
- It is stated in the literature that mothers with low BFSE breastfeed their infants for a shorter time, whereas those with high BFSE are more successful in initiating and maintaining breastfeeding.

Limitations

The sample of the study consists of only women living in Erzurum. Therefore, the results of this study could be generalized to the women within the scope of the study.

Conclusions

It was determined that the EI and BFSE perceptions of mothers were in adequate level. However, no significant correlation was determined between the EI and BFSE in the early postpartum period. Moreover, age, education level, perceived income status, and the status of planned pregnancy of the mothers affected their EI mean score, whereas their residence place, income status, the number of pregnancy and living children, and status of receiving prenatal care affected their BFSE levels.

In accordance with the result of the study, it is recommended to start breastfeeding trainings in prenatal period to increase the BFSE perception of mothers and to conduct experimental studies about solving the problem by evaluating the physiological and psychological characteristics that may affect the BFSE before the breastfeeding training and determining the associated characteristics.

Ethical Approval

Before the investigation, approval from the ethics committee (dated May 28, 2015, approval no. 2015/09) and hospital permit were obtained. Before starting data collection, women were informed about the study, and their questions were answered. Informed consent was obtained verbally. All procedures were conducted in accordance with the ethical standards of the institutional and/or national research committee and the 1964 Declaration of Helsinki and its later amendments.

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6 KARAKOÇ ET AL.

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