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Association between perceived social support, marital satisfaction, differentiation of self and perinatal depression

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ABSTRACT

OBJECTIVE: The aim of the study was to investigate the relationship between peripartum depression and social support, marital satisfaction, and self-differentiation.

METHODS: This cross-sectional study was conducted on postpartum women from December 28, 2021, and March 31, 2022. Postpartum women were evaluated using a questionnaire consisting of sections assessing sociodemographic characteristics, obstetric history, and psychometric instruments: Edinburgh Postpartum Depression Scale (EPDS), Marital Disaffection Scale (MDS), Multidimensional Scale of Perceived Social Support (MSPSS), and Differentiation of Self Inventory (DSI).

RESULTS: A total of 425 mothers were included in the study. Of those, 140 (32.9%) mothers scored ≥13 points on EPDS, and 285 (67.1%) mothers scored ≤12 points. Mothers who scored ≥13 on the EPDS were found to have significantly higher scores for marital dissatisfaction. Total scores of family support, friend support, emotional cutoff, fusion with others, and differentiation of self were higher in mothers who scored ≤12 points on the EPDS. There was no significant difference between the two groups in terms of significance with others, emotional reactivity and I position.

CONCLUSION: This study found that marital satisfaction is important in the development of perinatal depression both directly and through family support and emotional cuttoff. In addition, mothers with family support, friend support, and self-differentiation had comparatively lower EPDS scores, while mothers with marital dissatisfaction had higher EPDS scores.

Keywords: Marital satisfaction; postpartum depression; social support.

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Pregnancy and childbirth represent one of the most critical turning points in a woman's life [1]. Women suffer from mental health problems during this period. Perinatal depression (PND) is considered one of the most substantial health problems afflicting women during pregnancy, childbirth or in the first year following delivery [2]. It is a debilitating mental illness and is recognized as one of the most common non-obstetric complications faced by women of childbearing age [3].

The PND is a complex process that is influenced by many factors, including demographic characteristics, obstetrics, biopsychosocial and cultural factors [4]. Among these factors, low social support and poor marital relationships were most strongly associated with PND [5]. Given the prevalence of PND and its detrimental consequences, it is crucial to identify the associated risk factors to develop targeted interventions.

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There has been extensive research on the relationship between social support, interpersonal relationships, marital satisfaction, and postpartum depression [6]. However, very few studies have examined the combined effects of social support, marital dissatisfaction, and self-differentiation on PND, and the direct and indirect effects of these factors [7]. A comprehensive understanding of the impact of social support and marital satisfaction has implications for the prevention and management of PND. Therefore, the present study aimed to assess the relationship between PND and social support, marital dissatisfaction, and self-differentiation.

MATERIALS AND METHODS

This cross-sectional study was conducted on peripartum women at Zeynep Kamil Women and Children's Disease Training and Research Hospital between December 28, 2021, and March 31, 2022. The study design was approved by the Research Ethics Committee of the same hospital (approval number: 199, 22.12.2021). Database management complies with legislation on privacy and this research is in accordance with the principles of the Declaration of Helsinki. Verbal and written informed consent was taken from all study participants prior to participation. Those who accepted to participate were guaranteed confidentiality and anonymity.

Women aged between 18 and 45, who recently delivered within 2 to 14 weeks of giving birth, with minimum reading and writing literacy, no use medications for a diagnosed mental disorder, absence of any psychiatric illness, childbirth at or above 38 weeks of gestation, and had a healthy newborn at our hospital between December 28, 2021, and March 31, 2022, were included in the study. Those aged under 18 or over 45 years of age, with a history of psychological or physical illnesses, who had an addiction, whose babies had a congenital malformation, or who had stressful experiences such as the death of a relative within the past six months, who refused to participate were excluded from the study.

Data were collected using an original, fully anonymous, and voluntary interviewer-administered questionnaire. Data were gathered through face-to-face interviews. A questionnaire consisting of five parts was used in the research.

Measures

The first part contains items investigating sociodemographics, economic characteristics, and obstetrics history.

Highlight key points

- Marital satisfaction is important in the development of perinatal depression both directly and through family support and emotional cutoff.
- Mothers with family support, friend support, and self-differentiation had lower Edinburgh Postpartum Depression Scale (EPDS) scores.
- Lack of support from family members and marital dissatisfaction were associated with perinatal depression.

Edinburgh Postpartum Depression Scale (EPDS)

Edinburgh Postpartum Depression Scale (EPDS) was used to determine the risk of depression during the postpartum period. The scale was adapted to Turkish by Engindeniz et al. [8]. The EPDS is a four-point Likert-type scale, consisting of 10 items. A cutoff point of 12. The internal consistency coefficient (Cronbach's alpha) of EPDS was 0.79.

Marital Disaffection Scale (MDS)

Marital Disaffection Scale (MDS), which was developed by Kayser [9] (1996) and was adapted to Turkish by Celik [10] (2013) was administered. The scale was used to measure the level of disaffection toward one's spouse. The 21-item Likert-type scale has a single-factor structure. Cronbach's alpha coefficient was found to be 0.89.

Multidimensional Scale of Perceived Social Support (MSPSS)

Multidimensional Scale of Perceived Social Support (MSPSS) was developed by Zimet et al. [11] (1988) and was adapted to Turkish by Eker, Arkar and Yaldız [12] (2017), aiming to evaluate the perceived social support received from three different sources: family, friends and a special person. This scale consists of 12 items worded as a 5-point Likert-type scale, ranging from strongly disagree to strongly agree.

Differentiation of Self Inventory (DSI)

Differentiation of Self Inventory (DSI) was developed by Skowron and Friedlander [13] (1998) and was adapted into Turkish by Isik and Bulduk [14] (2015). The 20-item scale measured on a 6-point Likert type, consists of 4 sub-dimensions: Emotional Reactivity, I Position, Emotional Cutoff, and Fusion with others.

Statistical Analysis

All statistical analyses were performed using Statistical Package for the Social Science (IBM SPSS, Version 22.0.

Table 1. Demographic characteristics of the study group

Variables	n	%	Variables	n	%
Marital status			Yes	75	17.6
Married	404	95	No	350	82.4
Divorced	12	2.8	Alcohol use		
Seperated	6	1.4	Yes	17	4.0
No comment	3	0.7	No	406	95.5
Education level			Spouse's education level		
No school	5	1.2	No formal school	8	1.9
Primary school	58	13.6	Primary	57	13.4
Secondary school	102	24	Secondary	84	19.8
High School	130	30.6	Tertiary	142	33.4
University	130	30.6	University	130	30.6
Occupational status			Spouse's occupation		
House wife	295	69.4	Unemployed	27	6.4
Government employee	40	9.4	Governmental employee	49	11.5
Laborer	18	4.2	Laborer	143	33.6
Student	5	1.2	Student	3	0.7
Work in private company	52	12.2	Private employee	163	38.4
Other	15	3.5	Merchant	36	8.5
Income level perception			Number of children		
Low	95	22.4	0	17	4.0
Middle	302	71.1	1	167	39.3
High	28	6.6	2	135	31.8
Number of living children			3	80	18.8
1	147	34.6	≥4	24	5.6
2	142	33.7	Type of delivery		
3	96	22.6	Vaginal delivery	211	49.6
4	27	6.4	Cesarean section	213	50.1
5	5	1.2	Health problem history in pregnancy		
6	1	0.2	No	297	69.9
10	2	0.5	Yes	122	28.7
11	1	0.2	Vaginal bleeding	42	9.9
Wanting the pregnancy			Infection	10	2.4
Planned pregnancy	358	84.2	Preeclampsia	46	10.8
Unplanned pregnancy	63	14.8	Gestational diabetes mellitus	29	6.8
Years of marriage			Other	6	1.4
0–5	210	52.6	History of abortion		
6–10	108	25.9	No	269	63.3
11–20	77	18.4	Yes. 1 time	109	25.6
21–49	13	3.1	Yes. 2 times	37	8.7
Presence of a chronic disease			Yes. 3 times or more	10	2.4
None	325	76.5	Fetal sex		
Hypertension	16	3.8	Female	232	54.6
Diabets mellitus	25	5.9	Male	192	45.2
Thyroid	35	8.2	Desired baby gender		
Heart Disease	4	0.9	Female	123	28.9
Other	20	4.7	Male	91	21.4
Smoking			None	210	49.4

Table 2. Comparison of groups according to marital disaffection, multidimensional perceived social support, and differentiation of self

	EPDS ≥13	EPDS ≤12	t	p
MDS-Total	45.14±15.50	34.07±10.46	8.66	0.000
MSPSS-Family	20.33±6.24	24.41±5.19	-7.12	0.000
MSPSS-Friends	20.83±6.01	22.28±6.72	-2.16	0.032
MSPSS-Significant other	20.40±7.05	20.27±8.34	0.161	0.872
MSPSS-Total	61.46±16.26	67.10±17.16	-3.22	0.001
DSI-ER	15.71±5.22	16.84±6.27	-1.84	0.066
DSI-IP	20.82±4.71	20.20±6.03	1.07	0.290
DSI-EC	19.97±5.69	22.87±5.46	-5.06	0.000
DSI-FO	19.21±5.63	20.82±5.65	-2.73	0.007
DSI-Total	75.73±12.31	80.86±12.69	-3.92	0.000

MDS: Marital Disaffection Scale; MSPSS: Multidimensional Scale of Perceived Social Support; DSI: Differentiation of Self Inventory; DSI-ER: Differentiation of Self Inventory- Emotional Reactivity; DSI-IP: Differentiation of Self Inventory-I Position; DSI-EC: Differentiation of Self Inventory- Emotional Cut-off; DSI-FO: Differentiation of Self Inventory-Fusion with others.

IBM Corp., Armonk, New York, USA) for Windows software. Pearson Product Correlation was used to measure the correlations between the continuous variables. Independent samples t-test was applied for comparison between groups formed according to the postpartum depression score. To determine the mediating role of multidimensional social support and differentiation of self in the relationship between marital dissatisfaction and postpartum depression, the Process Macro v. 3 (Hayes, 2013) program was implemented [15].

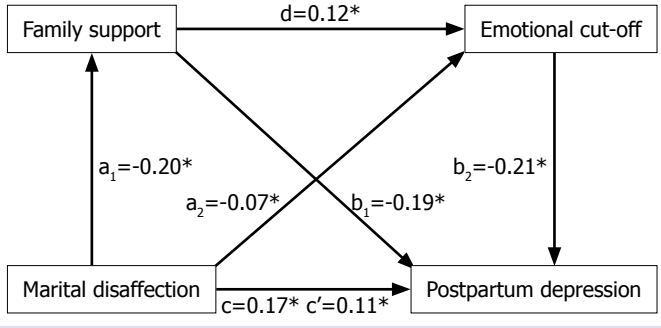

Figure 1. Serial multiple mediation effect of family support and emotional cutoff variables on the relationship between marital disaffection and postpartum depression.

Non-standardized beta values are given in the figure. *: P<.001.

RESULTS

A total of 425 recently delivered mothers were included in the study. Of those, 140 (32.9%) mothers scored ≥13 points on EPDS, and 285 (67.1%) mothers scored ≤12 points. The baseline characteristics of the study group were presented in Table 1. Mothers who scored ≥13 on the EPDS were found to have significantly higher scores of marital dissatisfaction. Total scores of family support, friend support, emotional cutoff, fusion with others and differentiation of self were higher in mothers who scored ≤12 points on the EPDS. There was no significant difference between the two groups in terms of significance with others, emotional reactivity and I position (Table 2).

As a result of the Pearson Product-Moment Correlation Analysis, the independent variable of the research, the Marital Disaffection Scale, showed a significant relationship with the Edinburgh Postpartum Depression Scale (EPDS) (r=0.40, p<0.001), Multidimensional Scale of Perceived Social Support-Family (MSPSS-Family), MSPSS-Friends (r=-0.14, p<0.001), MSPSS-Total (r=-0.22, p<0.001), Differentiation of Self Inventory- Emotional Cutoff (DSI-EC) (r=-0.22, p<0.001), and DSI-Total (r=-0.10, p<0.01), but did not show a significant relationship with MSPSS-Significant other (r=-0.03, p>0.05), DSI-Emotional Reactivity (DSI-ER) (r=-0.00, p>0.05), DSI- I Position (DSI-IP) (r=0.02, p>0.05), and Fusion with Others (DSI-FO) (r=-0.03, p>0.05). EPDS, which is the dependent variable of the study, showed a significant relationship with MSPSS-Fam-

Table 3. Relationships between marital disaffection. postpartum depression, multidimensional perceived social support and differentiation of self

Scales	2	3	4	5	6	7	8	9	10	11
1. MDS-Total	0.40**	-0.44**	-0.14**	-0.03	-0.22**	-0.00	0.02	-0.22**	-0.03	-0.10*
2. EPDS-Total	1	-0.36**	-0.16**	-0.01	-0.19**	-0.18**	0.06	-0.31**	-0.19**	-0.28**
3. MSPSS-Family		1	0.58**	0.39**	0.75**	-0.06	0.15**	0.19**	-0.01	0.12*
4. MSPSS-Friends			1	0.67**	0.89**	-0.05	0.13**	0.09	0.06	0.10*
5. MSPSS-Significant other				1	0.86**	-0.12*	0.12*	-0.04	-0.00	-0.02
6. MSPSS-Total					1	-0.09*	0.16**	0.08	0.02	0.07
7. DSI-ER						1	-0.52**	0.36**	0.34**	0.55**
8. DSI-IP							1	-0.13**	-0.19**	0.06
9. DSI-EC								1	0.62**	0.83**
10. DSI-FO									1	0.791**
11. DSI-Total										1

MDS: Marital Disaffection Scale; EPDS: Edinburgh Postpartum Depression Scale; MSPSS: Multidimensional Scale of Perceived Social Support; DSI: Differentiation of Self Inventory; DSI-ER: Differentiation of Self Inventory- Emotional Reactivity; DSI-IP: Differentiation of Self Inventory-I Position; DSI-EC: Differentiation of Self Inventory-Emotional Cut-off; DSI-FO: Differentiation of Self Inventory-Fusion with others; *: P<0.01; **: P<0.001.

ily (r=-0.36, p<0.001), MSPSS-Friends (r=-0.16, p<0.001), MSPSS-Total (r=-0.19, p<0.001), DSI-ER (r=-0.18, p<0.001), DSI-EC (r=-0.31, p<0.001), DSI-FO (r=-0.19, p<.001),, and DSI-Total (r=-0.28, p<0.001), while did not show a significant relationship with the MSPSS-Significant other (r=-0.01, p>0.05) and DSI-IP (r=0.06, p>0.05) (Table 3).

A model was created using Model 6 in the PROCESS macro plug-in of Hayes (2013) among the variables with values over 0.20 in the correlation analysis. According to this model, the serial multiple mediation effect of emotional cutoff and family support on the relationship between marital disaffection and postpartum depression was analyzed. As seen in Figure 1, the overall effect (c) of marital disaffection on postpartum depression was significant (b=0.27, SE=0.02, t=8.02, p<0.001). The direct effects (a1 and a2) of marital disaffection on both family support (b=-0.45, SE=0.02, t=-10.26, p<0.001), and emotional cutoff (b=-0.16, SE=0.02, t=-3.10, p<0.001) was found to be significant. The direct effect of family support on the emotional cutoff (d) was also significant (b=0.12, SE=0.05, t=2.27, p<0.05). When the direct effects of mediating variables on postpartum depression (b1 and b2) were examined, family support (b=-0.20, SE=0.05, t=-4.07, p<0.001) and emotional cutoff (b=-0.21, SE=0.04, t=-4.88, p<0.001) were significant. After controlling for mediator variables, it was determined that the direct effect (c') of family unpredictability on borderline personality traits remained significant (b=0.11, SE=0.02, t=5.52, p<0.001). The model explained 40% of the variance (F(1.419)=79.96, p<0.001).

The serial multiple mediation model tested in the research contains three different indirect effects (Fig. 1). The first indirect effect (a1b1) was the effect of marital disaffection through family support on postpartum depression (point estimate =0.036 and 95% bias-corrected and accelerated bootstrap confidence interval (BCa CI) [0.014, 0.064]). The second indirect effect (a2b2) was the effect of marital disaffection on postpartum depression through the emotional cutoff (point estimate=0.015 and 95% BCa CI [0.004, 0.030]). The third indirect effect (a1db2) reveals the serial mediation of primitive defensive style and self-salience in the effect of family unpredictability on borderline personality (point estimate =0.005 and 95% BCa CI [0.001, 0.011]). With all these indirect effects, the significance of the total indirect effect (point estimate =0.056 and 95% BCa CI [0.031, 0.087]) was tested with 10000 bootstrapped samples at a 95% confidence interval, and the results are summarized in Table 4. Based on the fact that 0 values did not exist between the lower and upper limits of the confidence interval values for both the total indirect effect and the other indirect effects (Hayes, 2013), it was concluded that all indirect effects in the model were significant.

Table 4. Point estimates and bias-corrected and accelerated (bca) confidence intervals for indirect effects on postpartum depression

	Multiplication of coefficients		%95 BCa CI	
Effects	Point estimate	SE	Low	High
Total indirect effect *(c – c')*	0.056	0.01	0.031	0.087
MD → MPSS-Family → PD *(a_1b_1)*	0.036	0.01	0.014	0.064
MD → DS-EC → PD *(a_2b_2)*	0.015	0.01	0.004	0.030
MD → MPSS-Family → DS-EC → PD *(a_1db_2)*	0.005	0.00	0.001	0.011

MD: Marital disaffection; MPSS-Family: Multidimensional Perceived Social Support-Family; DS-EC: Differentiation of Self-Emotional Cut-off; PD: Postpartum depression.

DISCUSSION

The present study investigated the associations between marital satisfaction, perceived social support, self-differentiation and PND. We found a significant relationship between marital dissatisfaction and PND. Marital dissatisfaction had an indirect effect on PND through family support and emotional cutoff. The direct effects of marital dissatisfaction on both family support and emotional cutoff was found to be significant. The direct effects of family support and emotional cutoff on PND were also significant. Overall, the findings in this study indicated that the model had an excellent fit. These study results revealed that EPDS score was higher in mothers with marital dissatisfaction. Mothers with family support, friend support and self-differentiation scored lower on the EPDS scores than their counterparts.

The present study showed that marital dissatisfaction was not only directly associated with PND but also had an indirect effect on PND through family support and emotional cutoff. This finding is consistent with that of Qi et al. [7] who also found that marital satisfaction had both direct and indirect effects on PPD through social support. Similarly, the study of Cho et al. [16], found that poor relationships with spouses, family, and friends were associated with PPD. These results corroborate the finding of a great deal of the previous work conducted in different cultural contexts, which indicated that low marital satisfaction was an important predictor of PPD [17–21]. Marital satisfaction may contribute to perceived social support, which consequently improve PND [22]. Therefore, the couple's relationship is crucial as marital satisfaction could thwart the development or worsening of postpartum depressive symptoms. There is a need for interventions that target the couple and encourage the babys father involvement in caregiving during the early postpartum period [23, 24].

Lack of family support and lower relationship satisfaction were identified as risk factors of PPD [25, 26]. It was reported in Indian and Thai studies that marital conflict is independently associated with perinatal depression in women [27, 28]. According to a study conducted in Canada, poor social support during the postpartum period was linked with an increased risk of PPD [29]. Another study in Qatar reported that postpartum depression was more likely to occur when there was an absence of family support [30]. Other countries, such as Korea, China, and the United States of America, have also stressed the importance of family support, and indicated that women are more likely to seek family support after childbirth because of hormonal and psychological changes [31–33]. The findings of this study confirm those of previous studies that a lack of support from family members and marital dissatisfaction were strongly associated with PPD. It should be noted, however, that women who suffer from depression may underestimate the importance of social support.

Several limitations should be considered when interpreting the findings of this study. First, we assessed the depressive symptoms at one time point during postpartum. Future research would benefit from the assessment of mothers at more postpartum time points in order to capture the full spectrum of symptoms. Second, fathers were not included. Therefore, it is difficult to understand the parental mental and relationship health and to draw conclusions regarding how marital satisfaction affects PND. Third, the cross-sectional design of the study does not allow drawing causal inferences. Notwithstanding these limitations, this work offers valuable insights into PND in women within the first month after delivery. The

current study is unique, as it is one of the comprehensive study, to our knowledge, to examine possible explanatory mechanisms between maternal PND and marital satisfaction, social support, and self-differentiation using data collected at an early postnatal time-point. We assessed how marital satisfaction affects the psychological well-being of women in their transition to motherhood. Additionally, our study has examined other important factors including as unplanned pregnancy, desired baby gender, and personality characteristics. Lastly, while this study focused specifically on PND, one question that warrants further attention is whether or not cultural factors and genetics influence PND. Considering the prevalence rate and postpartum depression to be an important public health problem, it may be suggested that more research is needed in this area.

Conclusion

The findings of the study showed that marital satisfaction is important in the development of perinatal depression both directly and through family support and emotional cuttoff. In addition, mothers with family support, friend support, and self-differentiation had comparatively lower EPDS scores, while mothers with marital dissatisfaction had higher EPDS scores.

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