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The effects of perceived social support on postpartum depression

Algılanmış sosyal desteğin doğum sonrası depresyona etkisi

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Abstract

Aim: Links between pregnancy and depression, especially during the first postpartum months are well recognized. Pregnancy-related depression may harm the mother as well as her baby. We aimed to investigate the effects of social support on depression in mothers during the postpartum period.

Methods: A cross-sectional study was conducted in Erzurum city center involving 110 mothers. Data was collected using The Edinburgh Postpartum Depression Scale (EPDS) and Multidimensional Scale of Perceived Social Support (MSPSS).

Results: Mean age of the participants was 28.8±5.9 years. Majority of the participants were housewives (75.5%; n=83). Of the participants, 26.4% (n=29) reported of having depression history. According to the EPDS, 47.3% of the mothers (n=52) had scores above the cutoff. The mean EPDS and MSPSS scores were 12.0±4.7 and 58.3±13.0, respectively. There was a significant negative correlation between the EPDS and the MSPSS scores (r=-0.42; p<0.001)

Conclusion: Social support and postpartum depression are firmly connected. Effective screening methods and early detection of postpartum depression should be utilized in connection with the primary healthcare providers, especially in areas with high risk, to prevent harmful effects of postpartum depression on maternal, infant and family health.

Keywords: Depression, Postpartum, Social support, Depressive disorder, Risk assessment, Maternal health

Öz

Amaç: Özellikle doğumdan sonraki ilk aylarda gebelik ve depresyon arasındaki ilişki iyi bilinmektedir. Gebelik ile ilgili depresyon hem anne, hem de bebek sağlığını tehlikeye atabilir. Bu çalışmada sosyal desteğin doğum sonrası dönemdeki annelerde depresyona olan etkisini araştırmayı amaçladık.

Yöntemler: Erzurum şehir merkezinde 110 anneyi içeren kesitsel bir araştırma yürütüldü. Veriler Edinburg Postpartum Depresyon skalası (EPDS) ve Çok Boyutlu Algılanmış Depresyon Skalası (MSPSS) ile toplandı.

Bulgular: Katılımcıların ortalama yaşı 28,8±5,9 yıl idi. Katılımcıların çoğunluğu ev hanımı idi (%75,5; n=83). Katılımcıların %26,4'ünün (n=29) depresyon öyküsü vardı. EPDS'ye göre annelerin %47,3'ü (n=52) kesme düzeyinin üzerinde puana sahipti. Ortalama EPDS ve MSPSS puanları sırasıyla 12,0±4,7 ve 58,3±13,0 idi. EPDS ve MSPSS puanları arasında anlamlı bir korelasyon saptandı (r=-0,42; p<0,001).

Sonuç: Sosyal destek ve doğum sonrası depresyon sıkı bir şekilde ilişkilidir. Depresyonun anne, bebek ve aile üzerindeki olumsuz etkilerini önlemek için özellikle yüksek risk altındaki bölgelerde birinci basamak sağlık hizmeti sunucularıyla bağlantılı olarak doğum sonrası depresyonun erken tanınması için etkili tarama yöntemleri kullanılmalıdır.

Anahtar kelimeler: Depresyon, Postpartum, Sosyal destek, Depresif bozukluk, Risk değerlendirmesi, Anne sağlığı

Introduction

Pregnancy-related depression may harm the mother as well as the baby [1]. Links between pregnancy and depression, especially during the first postpartum months are well recognized [2].

According to the Diagnostic and Statistical Manual of Mental Disorders [3], postpartum depression is defined as a major depressive episode with onset in pregnancy or within four weeks of delivery. A certain proportion of postpartum depressive episodes begin during pregnancy and continue and often worsen afterward [4].

The World Health Organization has moved up depression to the fourth rank in the worldwide health problems requiring urgent attention, with an expectation that unipolar depression will climb up to number four in the year 2020 [5,6]. The frequencies of depressive symptoms during pregnancy have been reported to be between 10-30% [7-9]. One cohort study in Turkey has presented postnatal and antenatal depression prevalence as 13.9% and 49.7%, respectively [10]. Other studies have shown depression prevalence of 27.9-33.1% among Turkish pregnant women [11,12].

The quite high occurrence of pregnancy-related depression in Turkey suggests the involvement of local factors such as frequent pregnancies, low educational level, domestic violence, and insufficient social support [10]. Thus, screening of postpartum depression using the Edinburgh Postnatal Depression Scale (EPDS) [13] has been introduced to Turkish family practice centers.

Social support is a complex concept, and there are multiple pathways by which social support may influence mental and physical health. There is robust evidence linking social support to both morbidity and mortality [14]. Although many studies are addressing the connection between social support and health, most measurement scales used are non-specific and lacking internationally validation [15]. Translated into many languages, the Multidimensional Scale of Perceived Social Support (MSPSS) measures the backing of family, friends, and significant other people [16]. Although it is well-documented that social support is related to mothers' psychological health [15], there are few studies addressing Multidimensional Scale of Perceived Social Support and postpartum depression.

In this study, we hypothesized that perceived social support is related to postpartum depression. Hence, we aimed to investigate the effects of social support on depression in mothers during the postpartum period.

Materials and methods

The study was conducted in a descriptive, cross-sectional design, between November 2016 and November 2017. Study reporting was done following the STROBE guidelines [17].

Setting and Participants

The study population consisted of women applying to the five family practice units of the Department of Family Practice at Atatürk University Faculty of Medicine. Three of these units are located within the campus of the University, near the lodging of the university staff; the other two are located in

the Aziziye District, which is 12 km away from the city center. The five family practice units are serving a population of about 17500 people. A total of 122 pregnant women were under follow-up during the study period.

Variables, Data Sources, and Measurement

A demographic information questionnaire, Beck Depression Scale for Primary Care (BDSPC), the EPDS, and the MSPSS were used as data collection tools.

Demographic information questionnaire

The demographic data questionnaire was developed by the researchers to collect data on a total of 20 characteristics of the mothers: maternal age, maternal education level, marital status, maternal occupation, family monthly income, marriage duration, working status, disease status, depression history, alcohol use, smoking status, substance use, drug use, number of children, presence of domestic violence, near loss, baby's health status, type of delivery, breastfeeding, and nursing difficulties.

BDSPC

As to the exclusion criteria, the BDSPC, developed by Beck et al. [18] and adapted into Turkish by Aktürk et al. [19] was applied in the antenatal period to detect depression. Scores of four and above points were considered as having depression.

EPDS

Developed by Cox et al. [13] and validated for Turkish by Engindeniz et al. [20], this instrument evaluates the risk of postpartum depression. The face-to-face-administered scale is of the four-point Likert type and consists of 10 items. Items 3, 5, 6, 7, 8, 9, and 10 show gradually decreasing strength and are scored as 3, 2, 1, and 0. Items 1, 2, and 4 are calculated in the form 0, 1, 2, and 3. The total score of the scale is obtained by adding the item scores together, where the lowest possible score is 0 and the highest possible score is 30. The cut-off point of the scale was determined as 12/13 with a Cronbach alpha reliability coefficient of 0.79 [21].

MSPSS

Developed by Zimet [16] and adapted into Turkish by Eker and Arkar [22], this instrument evaluates the qualitative presence of social support from three perspectives. Three different support groups can be identified from the tool: family (items 3, 4, 8, and 11), friends (items 6, 7, 9, and 12), and special people (questions 1, 2, 5, and 10). In addition, subscale scores can be added together to determine the total score of the scale. Each item is graded using a 7-point scale with Likert-type ratings. Totals of the subscale of the instrument vary between 4 and 28, while the total scores can be between 12 and 84. Higher scores indicate higher perceived social support. Accordingly, participants were grouped as "low social support" (12-48 points), "intermediate social support" (49-68 points), and "high social support" (69-84 points).

Data Collection

Study data were collected by the family medicine trainees working in the family practice units. All data collectors were instructed about how to fill out the data collection instruments. Data collection forms were administered to 119 women, who participated in the study voluntarily. Six women were excluded from the study because they had history of major depression. Three other women were excluded because they were mourning and the study was completed with 110 women

(Figure 1). Data collection was done during the scheduled fourth-week postnatal visit. Participants with a score of 12 and above were considered depressed. All women were interviewed face to face. After giving information about the study, informed consent was taken from all mothers.

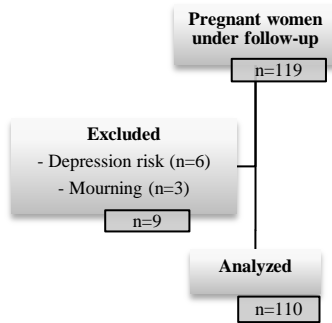


Figure 1: Study flow diagram.

Ethical aspects of the study

This study has been approved by the Ataturk University Faculty of Medicine Clinical Research Ethics Committee (No: B.30.2.ATA.0.01.00/168-Date:10.24.2016). Because the work was done in family health centers, additional permission was obtained from Erzurum Public Health Directorate.

Statistical Methods

The data were analyzed using SPSS for Windows (version 18.0) and Microsoft Excel 2010. The results were presented as n, %, mean, and standard deviation (SD). Normal distributions of numerical variables were evaluated using histogram graphs. The relationship between EPDS and MSPSS scores were analyzed using Pearson correlation analysis. To compare the EPDS scores between MSPSS social support groups, we used the One-Way ANOVA with post hoc LSD. Statistically, the significance limit was accepted as $p < 0.05$.

Results

Descriptive data

Data of 110 women were analyzed. Mean age of the participants was 28.8 ± 5.9 years. Participant characteristics are presented in Table 1. 40.9% of the women were married for 1-5 years. The number of primary school and university graduates was equal and 29 (26.4%). Majority of the participants were housewives (75.5%; $n=83$). 55.5% of the participants ($n=61$) had a monthly income of 1000-5000 TL (ca. 260-1315 USD).

Table 1: Participant characteristics

	n	%
Duration married	< 1 year	29 26.4
	1-5 years	45 40.9
	5-10 years	21 19.1
	>10 years	15 13.6
Education	None	5 4.5
	Primary school	29 26.4
	Intermediate school	17 15.5
	High school	28 25.5
	University	29 26.4
Occupation	Housewife	83 75.5
	Teacher	7 6.4
	Government employee	6 5.5
	Other	14 12.6
Monthly income	<500 TL	1 0.9
	500-999 TL	5 4.5
	1000-5000 TL	61 55.5
	>5000 TL	33 30.0
	Not disclosed	10 9.1
Total	110	100

Of the participants, 26.4% ($n=29$) reported of having depression history. Tobacco/alcohol/drug usage was 12.7% ($n=14$). 47.3% ($n=52$) were primipar. 15.5% ($n=17$) had unintended pregnancies. All participants had employed husbands. 59.1% ($n=65$) were living in self-owned housings. Majority of the participants (79.1%; $n=87$) reported no unrest or violence at home. 63.6% of the women ($n=70$) delivered via normal vaginal route while 36.4% ($n=40$) had cesarean sections. Breastfeeding frequency was 95.5% ($n=105$).

Postnatal problems of the mothers in order of frequency were; none (49.1%; $n=54$), health problems of the baby (20.0%; $n=22$), health problems of the mother (13.6%; $n=15$), immunization concerns (10.9%; $n=12$), anxiety in noticing needs of the baby (2.7%; $n=3$), sleep problems (2.7%; $n=3$), and neonatal mortality (0.9%; $n=1$).

Outcome data

According to the EPDS, 47.3% of the mothers ($n=52$) were under risk for postnatal depression.

While the mean EPDS scores were 12.0 ± 4.7 , mean scores for MSPSS were 58.3 ± 13.0 (Table 2). There was a significant negative correlation between the EPDS and the MSPSS ($r = -0.42$; $p < 0.001$) (Figure 2).

Table 2: Distribution of the Edinburgh postpartum depression scale (EPDS) and multidimensional scale of perceived social support (MSPSS) scores

	Min	Max	Mean	SD
EPDS	0	30	12.00	4.72
MSPSS	13	79	58.39	13.04
MSPSS family subscale	6	28	21.36	4.96
MSPSS friends subscale	7	26	18.45	4.48
MSPSS special people subscale	7	28	18.52	4.29

SD: Standard deviation

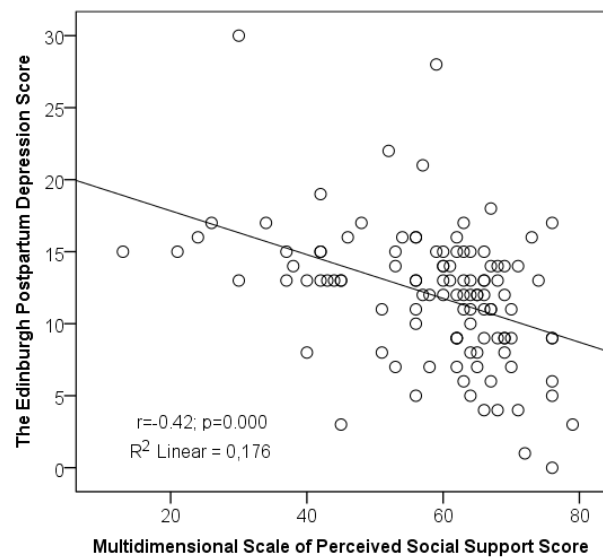


Figure 2: Correlation between the Edinburgh postpartum depression scale and multidimensional scale of perceived social support scores

Comparison of the mean EPDS scores according to the MSPSS groups with the One-Way ANOVA are given in Figure 3 ($p < 0.001$). As to the Post Hoc LSD analysis, the EPDS scores were higher in the “low social support” (14.61 ± 4.66) group compared with the “moderate” (12.06 ± 4.20) and “high social support” (8.80 ± 4.74) groups ($p < 0.05$). The EPDS score in the “moderate” group was higher than the “high group” ($p = 0.004$).

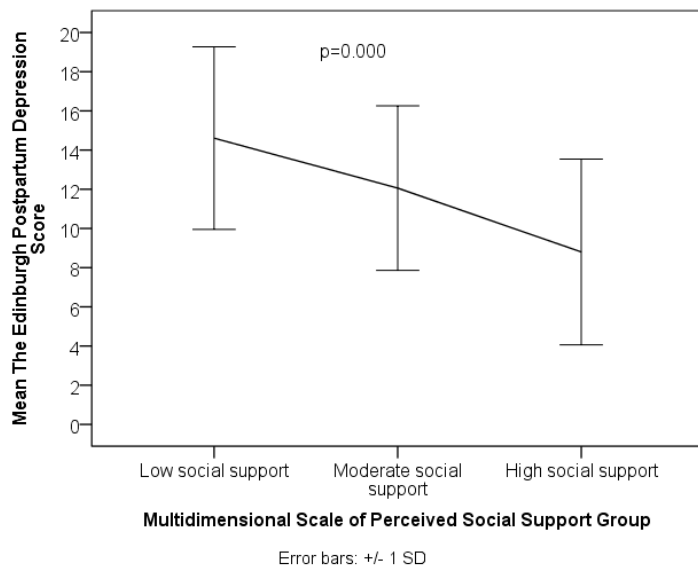


Figure 3: Mean values of the Edinburgh postpartum depression scale scores according to the multidimensional scale of perceived social support groups

Discussion

This study reveals the effects of social support on postpartum depression. Pregnancy, birth, and the postpartum period are complicated processes for the mother with numerous physical and psychological challenges. This is a time when the woman needs all the support that her family, close friends, and health professionals can provide.

The risk for postpartum depression (PPD) in Turkey was estimated as 14.0-34.6% by different studies [23–29]. Aydin et al. [28] studied 728 women in the same province and concluded that lack of husband's support, any stressful life event during the pregnancy, and infant with a health problem were associated with depression. Although our PPD rates seem high, compared with the general literature, Yildirim et al. [30] reported even higher proportions (51.3%). The inclusion of patients with past depression histories may have contributed to this difference. PPD prevalence in Asian countries range from 3.5% to 63.3% [31].

EPDS scores of women with past depression were comparatively higher. Strong associations have been reported between PPD and previous depression or anxiety disorders, increasing the frequency up to eight times [32]. As a requirement of the Turkish family structure, the relationships with the family of the mother's partner is also claimed as an essential factor affecting PPD [33]. Participants with extended families constituted more than 60% of our sample, which might be another contributing factor to the relative high EPDS scores.

There is a significant difference between the participants with and without family discomfort or violence concerning the EPDS scores. In the meta-analysis where Beck assessed factors increasing PPD risk, dissatisfaction with marriage is listed among the conditions that create prenatal anxiety [34].

Similar correlations between the EPDS and the MSPSS were shown in the study of Ege et al. [33] conducted in Malatya, another Eastern city, socio-demographically similar to Erzurum. The alleviating effect of social support on PPD might be related to the placental corticotropin-releasing hormone. Hahn-Holbrook et al. [35] have demonstrated that prenatal family support

predicted significantly fewer depressive symptoms postpartum and more gradual increases in placental corticotropin-releasing hormone from 29 to 37 weeks' gestation.

Although there might be cultural differences in social support, it seems to be an inter-culturally prevailing entity. One study from Australia reported that women with low social support in pregnancy were more likely than well-supported women to report poorer health during pregnancy and postnatally, to seek medical help more frequently, and to be more depressed postnatally [36].

While studies in Western cultures have shown that mothers are more individualized in the postpartum period, mothers in Asian cultures rely more on the social support of their mothers, their spouses and their mothers in law. In the classical Turkish tradition, the mother and baby are not left alone, supported, and helped with housekeeping and baby care for 40 days after delivery, which is proposed as a factor decreasing PPD [31].

Women who have little social support, poor health and a history of stressful life events are at risk of poor mental health during the perinatal period. On the other hand, primary healthcare providers are suggested to apply peer education in groups on emotional, physical or social problems that women may encounter after childbirth [37]. Efficient screening methods and early detection of postpartum depression should be utilized in connection with the primary healthcare providers, especially in areas with high risk, to prevent adverse effects of postpartum depression on maternal, infant, and family health. Easy accessibility, the first point of health-contact, as well as individualized and patient-centered approach put family medicine in the focus point in preventing and managing postpartum depression.

Limitations

This study included pregnant women applying to the five family practice units of a university family medicine department. The cohort served by the department may differ to some extent from the general population. Hence, despite the representativeness of the sample for the given population, caution is suggested to generalize the findings for the whole community. Future studies should concentrate on applying the instrument to different representative samples of the population.

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