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Research Article | Araştırma Makalesi

EVALUATION OF THE RELATIONSHIP OF POSTPARTUM DEPRESSION AND SOCIAL SUPPORT IN WOMEN WITH VAGINAL AND CESAREAN DELIVERY

VAJİNAL VE SEZARYEN DOĞUM YAPAN KADINLARDA POSTPARTUM DEPRESYON VE SOSYAL DESTEK İLİŞKİSİNİN DEĞERLENDİRİLMESİ

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ABSTRACT

Objective: This study was conducted to determine the prevalence of postpartum depression in women following normal vaginal delivery and caesarean section, to review some variables that are believed to be associated and to assess the relationship between the level of social support and postpartum depression.

Methods: The study group consisted of 710 women in total. In the study group, 355 women had normal vaginal delivery and 355 women had Caesarean section. The Edinburgh Postnatal Depression Scale was used to determine the level of postpartum depression. Level of social support was assessed with the Multidimensional Scale of Perceived Social Support. The questionnaire forms prepared in line with the study objective were completed by the investigators with face-to-face interview method. Chi-square test, Student's t-test and Mann-Whitney U test were used for statistical analyses.

Results: Prevalence of postpartum depression was found to be 24.4% in this study. Prevalence of postpartum depression was 21.7% in women who had normal vaginal delivery and 27.0% in women who had Caesarean section. Level of perceived social support was higher in women who had Caesarean section. It was determined that the levels of social support perceived by women with postpartum depression were lower in both normal vaginal delivery group and Caesarean section group.

Conclusion: Postpartum depression is one of important mental health problems in women. In our study, no difference in prevalence of postpartum depression was found in women who had normal vaginal delivery and Caesarean section. Level of perceived social support was higher in women who had Caesarean section.

Keywords: Postpartum women, postpartum depression, social support, vaginal delivery, cesarean delivery

ÖZ

Amaç: Bu çalışma, normal vajinal yolla ve sezaryen ile doğum yapanlar arasında postpartum depresyon sıklığının saptanması, ilişkili olduğu düşünülen bazı değişkenlerin incelenmesi ve sosyal destek düzeyi ile postpartum depresyon ilişkisinin değerlendirilmesi amacıyla yapılmıştır.

Yöntem: Çalışma grubu 355'i Normal Vajinal Yolla, 355'i de Sezaryen ile Doğum yapan toplam 710 kadından oluşmuştur. Postpartum depresyon düzeyinin değerlendirilmesinde Edinburg Doğum Sonu Depresyon Ölçeği kullanılmıştır. Sosyal destek düzeyi ise Çok Boyutlu Algılanan Sosyal Destek Ölçeği ile değerlendirilmiştir. Çalışmanın amacına uygun olarak hazırlanan anket formlar, yüz yüze görüşme yöntemi ile araştırmacılar tarafından doldurulmuştur. İstatistiksel analizler için Ki-kare testi, Student t testi ve Mann-Whitney U testi kullanılmıştır.

Bulgular: Bu çalışmada postpartum depresyon sıklığı %24,4 olarak saptanmıştır. Normal vajinal yolla doğum yapanlarda postpartum depresyon sıklığı %21,7, sezaryen ile doğum yapanlarda ise %27,0'dır. Sezaryen ile doğum yapanların algıladıkları sosyal destek düzeyi daha yüksekti. Hem normal vajinal yolla doğum yapanlarda hem de sezaryen ile doğum yapanlarda postpartum depresyon saptananların algıladıkları sosyal destek düzeylerinin daha düşük olduğu saptanmıştır.

Sonuç: Postpartum depresyon, önemli kadın ruh sağlığı sorunlarından biridir. Çalışmamızda normal vajinal yolla ve sezaryen ile doğum yapanlar arasında postpartum depresyon sıklığı açısından bir fark bulunamadı. Sezaryen ile doğum yapanların algıladıkları sosyal destek düzeyi daha yüksekti.

Anahtar Kelimeler: Postpartum dönem kadın, postpartum depresyon, sosyal destek, normal vaginal doğum, sezaryen doğum

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Introduction

Pregnancy and childbirth are very important and life-changing events. Childbirth is one of the most special experiences in women's life. Women go through biological, physiological and psychosocial changes during pregnancy. Physiological process of pregnancy and delivery also affects emotions of women. Childbirth is a process involving fear, anxiety, doubt and happiness, which is also shaped by body's childbearing ability, woman's faith, safety of delivery environment, and care given to a woman during pregnancy, delivery and postpartum period.[1,2] In the postpartum period, the risk of developing some mental disorders, particularly depression, is very high in women.[3] While postpartum depression onset usually begins in the first 4 weeks after childbirth, it may also start within the first year, last long years or cause postpartum psychosis.[4]

Global prevalence of postpartum depression (PPD) is estimated to be 7-30%.[3,5] In the studies conducted in Turkey, prevalence of postpartum depression is reported to range from 15.0% to 51.3%.[6-8] During pregnancy and the postnatal period, anxiety disorders, including panic disorder, generalised anxiety disorder, obsessive compulsive disorder, post-traumatic stress disorder and tokophobia (an extreme fear of childbirth), can occur on their own or can coexist with depression.[9]

Insufficient social support is known to be one of important risk factors for postpartum depression.[3,4,6] Social support can be defined as material and moral support provided to a person by their inner circle usually in the face of a stressful event.[10,11] Determined to be closely related to mental health of a person, social support cannot eliminate the situations causing stress but it reduces anxiety and desperation, promotes willingness to try new methods for stress management, boosts self-confidence, and allows easier toleration of stress.[12,13] Regardless of its nature, social support provided by inner circle alleviates feeling of desperation and boosts self-confidence in stress management. Furthermore, it meets fundamental social needs of individuals such as love, devotion, self-respect and sense of belonging to a group with a positive impact on physical and psychological health.[14,15]

This study was conducted to determine the prevalence of postpartum depression in women following normal vaginal delivery and Caesarean section, to review some variables that are believed to be associated and to assess the relationship between the level of social support and postpartum depression.

Methods

Study Design and Setting

This is a descriptive and relation-seeking study conducted on postpartum women presented to a Training and Research Hospital's Gynecology and Obstetric Polyclinic in Sakarya between January and June 2019.

Participants

Sample size for this study was calculated as minimum 710 (Power of test: 0.842, p: 0.30, Comparison p: 0.25). In the study group, 355 women (50.0%) had normal vaginal delivery and 355 women (50%) had Caesarean section. The women presented to Training and Research Hospital's Gynecology Polyclinic in Sakarya during the study were informed about the objective and purpose of the study. After written consent was obtained from the women who agreed to take part in the study, previously prepared questionnaires were completed by the investigators with face-to-face interview method. Over 20 years old, postpartum 6 weeks, pregnant women without chronic diseases, without multiple pregnancy and healthy babies were included in the study. The interview was conducted alone with the woman only. This procedure lasted for approximately 15-20 minutes. The rules stated in the Helsinki Declaration were complied in the stage of data collection.

Data Sources and Measurement

A questionnaire was prepared based on the literature to collect data.[3,5-7] Questionnaire included questions about some socio-demographic characteristics of women, some obstetric and marriage characteristics, some problems developing during pregnancy, some characteristics about the infant as well as items of the Edinburgh Postnatal Depression Scale and Multidimensional Scale of Perceived Social Support.

In our study, postpartum depression level was assessed with the Edinburgh Postnatal Depression Scale. The scale was developed by Orr et al. Turkish reliability and validity study of the scale was performed by Engindeniz et al. The scale consists of 10 items with 4-point Likert type. Items 3, 5, 6, 7, 8, 9 and 10 are scored as 3, 2, 1 and 0 according to decreased severity. Other items are reversed scored. Higher scores denote higher severity of depression. Individuals who obtained a score of 12/13 from this scale were regarded to have "postpartum depression".[16,17] Engindeniz et al. for Cronbach's alpha value was calculated as 0.72 and 0.70 for our study.

The Multidimensional Scale of Perceived Social Support developed by Zimet et al. was used to assess levels of social support provided to women. Its validity and reliability study in Turkey was conducted by Eker and Arkar. This scale allows assessment of perceived support from family, friends and other important people. The scale contains 12 items scored from 1 "very strongly disagree" to 7 "very strongly agree." The possible score range is between 12 and 84. Higher scores indicate high levels of perceived social support.[18,19] Eker and Arkar for Cronbach's alpha value was calculated as 0.89 and 0.84 for our study.

The women who are actively engaged with a revenue-generating business were defined as "employed". Income status was defined as sufficient, medium or insufficient in the women's own statements.

In the current study, the term 'smoker' was defined as an individual smoking at least one cigarette per day.

A woman having chronic disease was defined as a woman having any chronic disease diagnosed by a physician, such as cardiovascular system diseases, hypertension, diabetes mellitus, bronchial asthma, or chronic obstructive pulmonary disease.

Required Approvals

The approval of Sakarya University's Ethics Committee for Researches Other Than Drugs and Medical Devices was obtained with the resolution (number and dated 71522473/050.01.04/259) and permission of hospital management were obtained to conduct the study.

Statistical Analysis

The data obtained was evaluated in IBM SPSS (version 20.0) Statistical Package Program in computer. Shapiro-Wilk test was used to determine the normal distribution of data. Number, percentage, average, standard deviation, minimum, maximum and median values of were used for descriptive statistics. Chi-square test, Student's t-test and Mann-Whitney U test were used for statistical analyses. Pearson chi-square test and advanced chi-square analysis were used as the relationship test. Statistical significance was accepted as $p \leq 0.05$.

Results

In the study group, 355 (50.0%) women had normal vaginal delivery and 355 (50.0%) women had Caesarean section. Their ages ranged from 19 to 43 with a mean age of 28.96 ± 5.40 years.

Ages ranged from 19 to 42 with a mean age of 28.20 ± 5.21 years in women who had normal vaginal delivery and 19 to 43 with a mean age of 29.72 ± 5.48 years in women who had Caesarean section (t=3.769; p=0.001). It has been found that the average age of people who delivered by cesarean section is higher than those who had vaginal delivery. Prevalence of postpartum depression was found to be 24.4% (n=173) in this study. Prevalence of postpartum depression was 21.7% (n=77) in women who had normal vaginal delivery and 27.0% (n=96) in women who had Caesarean section. The distribution of women with and without postpartum depression in the study group by mode of delivery and some socio-demographic characteristics is given in Table 1a and Table 1b.

In the study group, number of women who had one pregnancy was 144 (40.6%) in normal vaginal delivery group and 106 (29.9%) in Caesarean section group. 322 (90%) of women who had normal vaginal delivery and 296 (83.4%) of women who had Caesarean section stated that it was a wanted pregnancy. The first marriage ranged from 13 to 36 with a mean age of 21.38 ± 4.00 years in women who had normal vaginal delivery and 13 to 40 with a mean age of 22.21 ± 4.25 years in women who had Caesarean section (t=2.65; p=0.008). Distribution of women with and without postpartum depression in normal vaginal delivery and Caesarean section groups by some obstetric and marriage characteristics is given in Table 2.

In the normal vaginal delivery group, 64 (18.0%) women had a history of any health problem during pregnancy, 9 (2.5%) had a history of physical trauma, 234 (63.1%) had a history of food craving and 12 (3.4%) had a history of antidepressant use during pregnancy. In the Caesarean section group, 69 (19.4%) women had a history of any health problem during pregnancy, 14 (3.9%) had a history of physical trauma, 227 (63.9%) had a history of food craving and 8 (2.3%) had a history of antidepressant use during pregnancy. Distribution of women with and without postpartum depression in normal vaginal delivery and Caesarean section groups by some problems during pregnancy is given in Table 3.

In women who had normal vaginal delivery, 125 (35.2%) had a girl and 230 (64.8%) had a boy. Number of women who had a baby with a birth weight of 2500-3499 g was 246 (69.3%). 129 (36.3%) women had a baby with a health problem. In women who had Caesarean section, 155 (43.7%) had a girl and 200 (56.3%) had a boy. Number of women who had a baby with a birth weight of 2500-3499 g was 202 (56.9%). 70 (19.7%) women had a baby with a health problem. Distribution of women with and without postpartum depression in normal vaginal delivery and Caesarean section groups by some characteristics of infant is given in Table 4.

The scores obtained from the Scale of Social Support by the women in the study group ranged from 19 to 84 with a mean score of 73.38 ± 13.23. The scores obtained from the Scale of Social Support ranged from 19 to 84 with a mean score of 71.08 ± 13.79 in women who had normal vaginal delivery and 12 to 84 with a mean score of 73.89 ± 14.54 in women who had Caesarean section (t=4,656; p=0.001). The average score from the social support scale in those who have given cesarean section was found to be higher than those who gave normal birth. Distribution of scores obtained from the Scale of Social Support by women with and without postpartum depression in the study group is given and distribution of scores obtained from the Scale of Social Support by women in normal vaginal delivery and Caesarean section groups is given in Table 5.

Table 1a. The distribution of women with and without postpartum depression in the study group by mode of delivery

Mode of delivery	Postpartum depression			Test value (X^2; p)
	No n (%)	Yes n (%)	Total n (%)	
Normal vaginal delivery	278 (78.3)	77 (21.7)	355 (50.0)	2.759; 0.097
Caesarean section	259 (73.0)	96 (27.0)	355 (50.0)	
Total	537 (75.6)	173 (24.4)	700 (100.0)	

Table 1b. Distribution of women with and without postpartum depression in normal vaginal delivery and Caesarean section groups by some socio-demographic characteristics

Some socio-demographic characteristics	Normal Vaginal Delivery Postpartum Depression		Caesarean Section Postpartum Depression	
	No n (%)*	Yes n (%)*	No n (%)*	Yes n (%)*
Age group				
≤ 24	117 (72.7)	44 (27.3)	48 (69.6)	21 (30.4)
25-29	174 (75.0)	58 (25.0)	81 (74.3)	28 (25.7)
≥ 30	246 (77.6)	71 (22.4)	130 (73.4)	47 (26.6)
Test value (X^2; p)	1.484; 0.476		0.525; 0.769	
Educational status				
Secondary school and below	144 (75.4)	47 (24.6)	130 (67.7)	62 (32.3)
High school and above	134 (81.7)	30 (18.3)	129 (79.1)	34 (20.9)
Test value (X^2; p)	2.071; 0.150		**5.840; 0.016**	
Employment status				
Employed	67 (74.4)	23 (25.6)	36 (64.3)	20 (35.7)
Unemployed	211 (79.6)	54 (20.4)	223 (74.6)	76 (25.4)
Test value (X^2; p)	0.778; 0.378		2.039; 0.153	
Family income status				
Good	99 (85.3)	17 (14.7)	83 (79.8)	21 (20.2)
Moderate	177 (76.6)	54 (23.4)	171 (73.4)	62 (26.6)
Poor	2 (25.0)	6 (75.0)	5 (27.8)	13 (72.2)
Test value (X^2; p)	**17.152; 0.001**		**21.119; 0.001**	
Family type				
Nucleus	205 (76.5)	63 (23.5)	209 (71.6)	83 (28.4)
Extended	73 (83.9)	14 (16.1)	50 (78.4)	13 (20.6)
Test value (X^2; p)	1.712; 0.191		1.223; 0.269	
Smoking				
Non-smoker	214 (80.1)	53 (19.9)	205 (75.4)	67 (24.6)
Smoker	64 (72.7)	24 (27.3)	54 (65.1)	29 (34.9)
Test value (X^2; p)	1.732; 0.188		2.922; 0.087	
History of a physician-diagnosed disease requiring constant drug use				
No	253 (77.6)	73 (22.4)	223 (73.6)	80 (26.4)
Yes	25 (86.2)	4 (13.8)	36 (69.2)	16 (30.8)
Test value (X^2; p)	0.708; 0.400		0.236; 0.627	
Total	278 (78.3)	77 (21.7)	259 (73.0)	96 (27.0)

*Percentages based on the line total

Table 2. Distribution of women with and without postpartum depression in normal vaginal delivery and Caesarean section groups by some obstetric and marriage characteristics

Some obstetric and marriage characteristics	Normal Vaginal Delivery Postpartum Depression		Caesarean Section Postpartum Depression	
	No	Yes	No	Yes
Number of pregnancy				
1	124 (86.1)	20 (13.9)	80 (75.5)	26 (24.5)
2	78 (75.0)	26 (25.0)	62 (75.6)	20 (24.4)
≥ 3	76 (71.0)	31 (29.0)	117 (70.1)	50 (29.9)
Test value (X^2; p)	**9.171; 0.010**		1.343; 0.511	
Gestational week				
≤ 36	37 (78.7)	10 (21.3)	80 (75.5)	26 (24.5)
37-40	197 (77.3)	58 (22.7)	62 (75.6)	20 (24.4)
≥ 41	44 (83.0)	9 (17.0)	117 (70.1)	50 (29.9)
Test value (X^2; p)	0.864; 0.649		1.343; 0.511	
Wanted pregnancy				
Unwanted	26 (78.8)	7 (21.2)	43 (72.9)	16 (27.1)
Wanted	252 (78.3)	70 (21.7)	216 (73.0)	80 (27.0)
Test value (X^2; p)	0.000; 1.000		0.000, 1.000	
Postpartum period (week)				
≤ 4	37 (74.0)	13 (26.0)	21 (72.4)	8 (27.6)
5-14	53 (81.5)	12 (18.5)	55 (72.4)	21 (27.6)
15-24	64 (75.3)	21 (24.7)	48 (64.9)	26 (35.1)
≥ 25	124 (80.0)	31 (20.0)	135 (76.7)	41 (23.3)
Test value (X^2; p)	1.661; 0.646		3.727; 0.293	
Number of childbirths				
1	133 (82.6)	28 (17.4)	86 (69.4)	38 (30.6)
2	80 (74.8)	27 (25.2)	81 (77.9)	23 (22.1)
≥ 3	65 (74.7)	22 (25.3)	92 (72.4)	35 (27.6)
Test value (X^2; p)	3.205; 0.201		2.113; 0.348	

Table 2 (Continued)

First marriage age				
≤ 19	101 (75.9)	32 (24.1)	64 (67.4)	31 (32.6)
20-24	116 (78.4)	32 (21.6)	137 (76.5)	42 (23.5)
≥ 25	61 (82.4)	13 (17.6)	58 (71.6)	23 (28.4)
Test value (X^2; p)	1.181; 0.554		2.741; 0.254	
Marriage type				
Arranged	55 (65.5)	29 (34.5)	59 (67.8)	28 (32.2)
Love	170 (83.3)	34 (16.7)	169 (76.1)	53 (23.9)
Bride kidnapping/elopement	53 (79.1)	14 (20.9)	31 (67.4)	15 (32.6)
Test value (X^2; p)	**11.201; 0.004**		3.018; 0.221	
Total	278 (78.3)	77 (21.7)	259 (73.0)	96 (27.0)

*Percentages based on the line total

Table 3. Distribution of women with and without postpartum depression in normal vaginal delivery and Caesarean section groups by some problems during pregnancy

	Normal Vaginal Delivery Postpartum Depression		**Caesarean Section Postpartum Depression**	
	No	Yes	No	Yes
Some problems during pregnancy	n (%)*	n (%)*	n (%)*	n (%)*
History of any health problem during pregnancy				
No	228 (78.4)	63 (21.6)	219 (76.6)	67 (23.4)
Yes	50 (78.1)	14 (21.9)	40 (58.0)	29 (42.0)
Test value (X^2; p)	0.000; 1.000		**8.830; 0.003**	
History of physical trauma during pregnancy				
No	275 (79.5)	71 (20.5)	252 (73.9)	89 (26.1)
Yes	3 (33.3)	6 (66.7)	7 (50.0)	7 (50.0)
Test value (X^2; p)	**Fisher; 0.004**		Fisher; 0.064	
History of food craving during pregnancy				
No	109 (83.2)	22 (16.8)	84 (65.6)	44 (34.4)
Yes	169 (75.4)	55 (24.6)	175 (77.1)	52 (22.9)
Test value (X^2; p)	2.930; 0.087		**5.455; 0.020**	
History of antidepressant use during pregnancy				
No	267 (77.8)	76 (22.2)	253 (72.9)	94 (27.1)
Yes	11 (91.7)	1 (8.3)	6 (75.0)	2 (25.0)
Test value (X^2; p)	Fisher; 0.475		Fisher; 1.000	
History of antidepressant use before pregnancy				
No	271 (79.5)	70 (20.5)	245 (73.4)	89 (26.6)
Yes	7 (50.0)	7 (50.0)	14 (66.7)	7 (33.3)
Test value (X^2; p)	**Fisher; 0.016**		0.173; 0.677	
Total	278 (78.3)	77 (21.7)	259 (73.0)	96 (27.0)

*Percentages based on the line total

Table 4. Distribution of women with and without postpartum depression in normal vaginal delivery and Caesarean section groups by some characteristics of infant

	Normal Vaginal Delivery Postpartum Depression		**Caesarean Section Postpartum Depression**	
	No	Yes	No	Yes
Some characteristics of infant	n (%)*	n (%)*	n (%)*	n (%)*
Sex				
Male	178 (77.4)	52 (22.6)	144 (72.0)	56 (28.0)
Female	100 (80.0)	25 (20.0)	115 (74.2)	40 (25.8)
Test value (X^2; p)	0.324; 0.569		0.213; 0.644	
Birth weight (gram)				
≤ 2499	14 (73.7)	5 (26.3)	24 (57.1)	18 (42.9)
2500-3499	195 (79.3)	51 (20.7)	145 (71.8)	57 (28.2)
≥ 3500	69 (76.7)	21 (23.3)	90 (81.1)	21 (18.9)
Test value (X^2; p)	0.515; 0.773		**9.178; 0.010**	
Any health problem				
No	178 (78.8)	48 (21.2)	226 (79.3)	59 (20.7)
Yes	100 (77.5)	29 (22.5)	33 (47.1)	37 (52.9)
Test value (X^2; p)	0.075; 0.785		**27.844; 0.001**	
Breastfeeding status				
No breastfeeding	65 (77.4)	19 (22.6)	92 (73.0)	34 (27.0)
Breastfeeding	213 (78.6)	58 (21.4)	167 (72.9)	62 (27.1)
Test value (X^2; p)	0.007; 0.932		0.000; 0.985	
Total	278 (78.3)	77 (21.7)	259 (73.0)	96 (27.0)

*Percentages based on the line total

Table 5. Distribution of scores obtained from the Scale of Social Support by women with and without postpartum depression in normal vaginal delivery and Caesarean section groups

Postpartum depression	n (%)	Normal Vaginal Delivery Scale of Social Support Score Median (min-max)	Caesarean Section Scale of Social Support Score Median (min-max)	Total Scale of Social Support Score Median (min-max)
No	537 (75.6)	78.0 (23.0-84.0)	82.0 (25.0-84.0)	79.0 (23.0-84.0)
Yes	173 (24.4)	63.0 (19.0-84.0)	72.5 (12.0-84.0)	69.0 (12.0-84.0)
Total	710 (100.0)	76.0 (19.0-84.0)	81.0 (12.0-84.0)	78.0 (12.0-84.0)
Test value* (z; p)		**6.508; 0.001**	**5.122; 0.001**	**7.722; 0.001**

*Mann-Whitney U test

Discussion

Prevalence of postpartum depression (PPD) was found to be 24.4% in this study. Prevalence of postpartum depression ranges from 15% to 51.3% in the studies conducted in Turkey.[6-8] Prevalence of postpartum depression differs in literature. Compared to studies conducted, prevalence of postpartum depression is lower in our study. This low prevalence may result from timing of measurement as well as personal and cultural factors. In the same way, literature determined higher depressive complaints in women with high risk of Caesarean section.[20,21] In our study findings, no difference in prevalence of postpartum depression was found in women who had normal vaginal delivery and Caesarean section.

In our study, no difference in prevalence of postpartum depression was determined in women who had normal vaginal delivery and Caesarean section in terms of age groups, educational status and employment. It was determined that prevalence of postpartum depression was only higher in women who had poor family income in the Caesarean section group. In the literature, Ozkan et al. determined that there was no significant difference between prevalence of postpartum depression and demographic characteristics and only the group with poor income status was statistically different than the group with good income status.[22] Ceber found that there was no difference in terms of age, social security status, employment and family type with a depression risk of 2.87 times higher in women having an extended family than women having a nuclear family and 5 times higher in women with unplanned pregnancy than women with planned pregnancy. [23] In our study, it was determined that socio-demographic characteristics had no effect on the risk of postpartum depression but women with poor income status may be at risk of depression.

In our study, it was found that prevalence of postpartum depression was higher in women who had 3 or more pregnancy in the normal vaginal delivery group, that there was no difference between number of pregnancy and prevalence of postpartum depression in the Caesarean section group and that there was no difference in the prevalence of postpartum depression in terms of pregnancy period and wanted/unwanted status of pregnancy in both groups. This may be due to the fact that the mother feels inadequate and exhausted due to being in a caring position for more than one child. Goweda & Metwally has shown that mothers with multiple children are more likely to have depression than those with only one child.[24] In the same study, beside previous factors increasing risk of depression, unplanned pregnancy was found to be one of the significant factors in the current study to increase Edinburgh Postnatal Depression Scale scores. Ceber found that the risk of depression was 5 times higher in women with unplanned pregnancy than those with planned pregnancy.[23] Because multi-parity increases both the physical and financial burden of childcare, it can increase the risk of family stress and Postpartum Depression.

Ozkan et al. reported that the difference between the scores of the Edinburgh Postnatal Depression Scale in women having their first pregnancy and women having more than one pregnancy was statistically significant in favor of women having their first pregnancy.[22] Although primiparous mothers have higher scores of Postnatal Depression Scale, the difference is not significant. Postnatal depression scores may be higher due to increased stress after childbirth in primiparous mothers. Likewise, while there is no statistical difference between Caesarean section and vaginal delivery in terms of postpartum depression risk, mean scores obtained from the Edinburgh Postnatal Depression Scale by women in the Caesarean section group were found to be higher. This may be caused by higher number of problems experienced in the postpartum period by mothers who had Caesarean section and higher scores of traumatic childbirth perception in the Caesarean section group.

In our study, no difference in terms of prevalence of postpartum depression was determined between women with and without a history of health problem during pregnancy in the normal vaginal delivery group. However, the prevalence of postpartum depression was found to be higher in women with no history of health problem during pregnancy in the Caesarean section group. The results of our study are consistent with the literature.

Our study found that the women who used antidepressant before pregnancy in the normal vaginal delivery group had higher prevalence of postpartum depression and that there was no difference in terms of prevalence of postpartum depression between women who used and didn't use antidepressant before pregnancy in the Caesarean section group. It was

reported that the risk of developing postpartum depression is 3 times higher in people with a history of depression. In the literature, it is stated that pregnancy stress affects the postpartum period of the mother and causes depression, low birth weight and premature birth.[25,26]

In our study, it was found that there was no difference between women having a baby with and without health problem in terms of prevalence of postpartum depression in the normal vaginal delivery group; however, women having a baby with a health problem in the Caesarean section group had higher prevalence of postpartum depression. No relationship was determined between postpartum depression and the infant's health. Gumus et al. reported that having a baby with a health problem is an important risk factor for postpartum depression.[27]

In our study, the level of social support perceived by women who had Caesarean section was higher than those who had normal vaginal delivery. Social support ensures well-being of both mother and fetus. Having limited social support during pregnancy may cause depression during pregnancy or in postpartum period[14]. Furthermore, it is associated with low birth weight and increases smoking during pregnancy, birth complications, the risk of premature labor and intrauterine growth retardation.[30,31] Women need to receive support and feel that they are cared during pregnancy.30 [32] Pregnant women prefer to receive support from emotionally strong people.31 [33] 74.5% of the women in Turkey need social support for childbirth. Women expect to receive support mostly from their family, spouse and healthcare professionals.[34]

Psychosocial factors that increase the risk of postpartum depression are lack of social support, financial problems, stressful events and unwanted pregnancies.[24] Unplanned pregnancy disrupts maternal bond after childbirth and the risk of depression increases in mothers who cannot develop a bond with their baby. Ozkan et al. reported that the risk of depression is higher in mothers having unplanned pregnancy.[22] In a study conducted to review maternal depression in planned and unplanned pregnancies, it was reported that women who had unplanned pregnancy are at risk of developing depression 2.5 times higher than those who had planned pregnancy in both assessments (during pregnancy and childbirth).[33] The results of our study are consistent with the literature.

The scores obtained from the scale of social support by the women who had postpartum depression in the study group were found to be lower. It was determined that the levels of social support perceived by women with postpartum depression were lower in both normal vaginal delivery group and Caesarean section group.

Conclusion

Postpartum depression is one of important mental health problems in women. In our study, no difference in prevalence of postpartum depression was found in women who had normal vaginal delivery and Caesarean section. In the Caesarean section group, postpartum depression was higher in women whose educational level is secondary school and lower, whose family income level is poor, those with a history of any health problem during pregnancy, those with no history of food craving during pregnancy, those who gave birth to a baby with a birth weight of <2500 g and those having a baby with a health problem. Level of perceived social support was higher in women who had Caesarean section. It was determined that the levels of social support perceived by women with postpartum depression were lower in both normal vaginal delivery group and Caesarean section group. Screenings for early diagnosis of postpartum depression, offering psychological counseling to women to cope with this problem and increasing social support level may be advantageous. More comprehensive studies are required to establish the relationship between mode of delivery and postpartum depression.

Limitations

The limitations of the study may include the facts that it is differences between normal delivery and women who have been given by cesarean section, and they are not matched and there are differences between the sociodemographic characteristics, negative childbirth experience is associated with postpartum depression no questions asked, a cross-sectional study, it was conducted on the women who presented to one hospital only and it is not possible to establish definitive diagnosis with the scales used.

Compliance with Ethical Standards

The approval of Sakarya University's Ethics Committee for Researches Other Than Drugs and Medical Devices was obtained with the resolution (number and dated 71522473/050.01.04/259) and permission of hospital management were obtained to conduct the study.

Conflict of Interest

The author declares no conflicts of interest.

Author Contribution

SS, SDG, KO, AU: Study concept and design; KO, SDG: Acquisition of subjects and data; SS, KO, AU: Analysis and interpretation of data; SS, KO, SDG, AU: Preparation of manuscript. All the authors contributed to the writing of the paper. All authors read and approved the final manuscript.

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