

The relationship between social support perceived by primiparous and multiparous mothers undergoing cesarean section and the risk of postpartum depression at Airlangga University Hospital

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Abstract

Background: Postpartum depression is a manifestation of baby blues that is not well-managed. Postpartum depression can be experienced by both primiparous and multiparous mothers, particularly those who undergo cesarean section. The exact cause of postpartum depression is still unknown. However, the factors influencing postpartum depression are generally interrelated. This study aims to determine the relationship between social support in primiparous and multiparous mothers undergoing cesarean section and the risk of postpartum depression at Airlangga University Hospital.

Method: This quantitative study has an analytical observational design and a cross-sectional approach. Sampling was done using consecutive sampling. A total of 66 postpartum primiparous and multiparous mothers who underwent cesarean section at Airlangga University Hospital between August and October 2024 were included as respondents.

Results: The analysis showed that the majority of postpartum primiparous and multiparous mothers who had a cesarean section received high social support and were not at risk for postpartum depression. However, there were still risks of postpartum depression in both groups. The statistical test using Spearman's rho test yielded p-values of 0.073 ($p > 0.05$) for the primiparous group and 0.244 ($p > 0.05$) for the multiparous group.

Conclusion: There is no significant relationship between social support and the risk of postpartum depression in primiparous and multiparous mothers undergoing cesarean section at Airlangga University Hospital

Keywords: Postpartum depression; Social support; Cesarean section; Primiparous; Multiparous

1. Introduction

Postpartum is the period that mothers go through after childbirth, starting from the end of the fourth stage of labor and lasting until 6 weeks (42 days), marked by the cessation of bleeding [1]. This period is a crisis for the mother, partner, and family due to physical, psychological, emotional, and social changes in the mother [2]. These changes are often not easy for women to accept [3]. Therefore, proper adjustments are necessary during this period. Some psychological issues during the postpartum period include baby blues, postpartum depression, and postpartum psychosis. Postpartum depression is a manifestation of baby blues that has not been properly managed [4].

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WHO reports that the general prevalence of baby blues in the global population is 3-8%, with 50% of cases occurring in the productive age group, 20-50 years old [5]. In Indonesia, according to the Ministry of Health [6], the prevalence of baby blues in adolescents and women of childbearing age is 1.8%. Meanwhile, the global prevalence of postpartum depression is found to be around 17.22%, with Southeast Asia at 13.53%, and the highest prevalence in developing countries at 19.99% [7]. Research in Indonesia shows that 4% of 1,285 postpartum mothers experienced depression, with the highest proportion in urban areas (5.7%) compared to rural areas (2.9%) [8][9]. Furthermore, research at Airlangga University Hospital shows that 4 out of 24 pregnant women showed signs of depression (EPDS \geq 8), with the tendency for postpartum depression being 17%, with an average score of 2.88.

The exact cause of postpartum depression is still unknown. However, the factors influencing postpartum depression are generally not isolated, so the signs and symptoms of postpartum depression result from a multifactorial mechanism. Postpartum depression can occur in both primiparous and multiparous mothers, but primiparous mothers are more likely to experience postpartum depression due to the adaptation process and lack of experience [10][11][12][13]. However, this does not align with several studies that indicate parity is not directly associated with postpartum depression [14][15][16] [17][18].

Additionally, there is a relationship between spousal support and anxiety levels in pregnant women before undergoing cesarean section in the working area of Puskesmas Bulo. On average, pregnant women feel anxious about the cesarean section process, with some experiencing difficulty sleeping, fear of something happening to themselves or their baby, and even refusing to go to the hospital due to the absence of labor signs [19]. Other studies also mention that cesarean delivery carries a risk of postpartum depression twice as high compared to vaginal delivery [20].

Social support can come from any interpersonal relationship within a person's social network, involving family members, friends, neighbors, religious institutions, colleagues, caregivers, or support groups. Studies show that mothers experiencing postpartum depression often receive less support from their husbands, and this is consistent with findings that social support, including spousal or family support, is associated with the risk of postpartum depression [21][22].

Based on the background described above, this study is important to determine the relationship between social support in primiparous and multiparous mothers undergoing cesarean section and the occurrence of postpartum depression, especially since this has not been established at Airlangga University Hospital.

2. Material and methods

The research conducted is a quantitative study with an analytical observational design and a cross-sectional approach. The population in this study consists of all postpartum primiparous and multiparous mothers who underwent cesarean section at Airlangga University Hospital. The sampling method used was non-random (non-probability sampling) with a consecutive sampling technique. The inclusion criteria for this study were postpartum mothers on days 8 to 14 following a cesarean section, mothers who were willing to be respondents, and mothers who could speak Indonesian. The exclusion criteria were mothers with a history of psychiatric treatment, mothers who were illiterate, and mothers who were unwell and unable to complete the questionnaire. Data collection in this study was done by documenting the responses from the questionnaires. The Edinburgh Postnatal Depression Scale (EPDS) questionnaire was used to measure the risk of postpartum depression, and the Multidimensional Scale of Perceived Social Support (MSPSS) was used to measure the social support received by the mothers. Data analysis in this study was performed using SPSS with Spearman's Rho Test.

3. Results

3.1. Respondent Characteristics

Table 1 shows that the majority of primiparous cesarean section mothers are aged 20-35 years (90.9%) with 30 individuals, most of them have a high school education (63.6%) with 21 individuals, the majority are not working or are housewives (66.7%) with 22 individuals, the most common occupation of their husbands is in the private sector (51.5%) with 17 individuals, most mothers live with their husbands at home (60.6%) with 20 individuals, and all 33 mothers have a marital status and planned pregnancy (100%).

Table 1 Respondent Characteristics

Characteristics	Parity			
	Primiparous		Multiparous	
	f	%	f	%
Age				
<20	2	6.1	1	3
20-35	30	90.9	22	66.7
>35	1	3	10	30.3
Mother's Education				
Elementary School or equivalent	0	0	2	6.1
Junior High School or equivalent	1	3	4	12.1
Senior High School or equivalent	21	63.6	19	57.6
Associate Degree (D3), Bachelor's Degree (D4/S1), or higher	11	33.3	8	24.2
Mother's Occupation				
Not working/Housewife	22	66.7	29	87.9
Entrepreneur	7	21.2	1	3
Private sector	4	12.1	2	6.1
Civil Servant	0	0	1	3
Others	0	0	0	0
Husband's Occupation				
Not working	0	0	0	0
Entrepreneur	12	36.4	12	36.4
Private sector	17	51.5	18	54.5
Civil Servant	2	6.1	0	0
Others	2	6.1	3	9.1
Family Members at Home				
Living with husband	20	60.6	23	69.7
Living with husband and in-laws/parents/relatives	13	39.4	10	30.3
Marital Status				
Married	33	100	33	100
Unmarried	0	0	0	0
Pregnancy Status				
Planned pregnancy	33	100	26	78.8
Unplanned pregnancy	0	0	7	21.2
Out-of-wedlock pregnancy	0	0	0	0

In the group of multiparous cesarean section mothers, the majority are aged 20-35 years (66.7%) with 22 individuals, most of them have a high school education (57.6%) with 19 individuals, the majority are not working or are housewives (87.9%) with 29 individuals, the most common occupation of their husbands is in the private sector (54.5%) with 18 individuals, 23 mothers live with their husbands (69.7%), all 33 mothers (100%) have a marital status, and 26 mothers (78.8%) have a planned pregnancy status.

3.2. Bivariate Analysis

Table 2 The Relationship Between Social Support Perceived by Primiparous Mothers Undergoing Cesarean Section and the Risk of Postpartum Depression

Social Support	Postpartum Depression						Total		Spearman's Rho Test	
	No Risk		Moderate Risk		Severe Risk				<i>P</i>	<i>r</i>
	f	%	f	%	f	%	N	%		
Low	0	0	0	0	0	0	0	0	0.073	-0.317
Moderate	0	0	0	0	2	100	2	100		
High	27	87.1	1	3.2	3	9.7	31	100		
Total	27	81.8	1	3	5	15.2	33	100		

Table 2 The results of the Spearman's Rho test showed a p-value of 0.073, greater than the established threshold of <0.05 . This indicates that there is no relationship between the social support of primiparous mothers undergoing cesarean section and the risk of postpartum depression at Airlangga University Hospital. The correlation coefficient value indicates a moderate result ($r = -0.317$).

Table 3 The Relationship Between Social Support Perceived by Multiparous Mothers Undergoing Cesarean Section and the Risk of Postpartum Depression

Social Support	Postpartum Depression						Total		Spearman's Rho Test	
	No Risk		Moderate Risk		Severe Risk				<i>P</i>	<i>r</i>
	f	%	f	%	f	%	N	%		
Low	0	0	0	0	0	0	0	0	0.244	-0.209
Moderate	5	71.4	0	0	2	28.6	7	100		
High	22	84.6	2	7.7	2	7.7	26	100		
Total	27	81.8	2	6.1	4	12.1	33	100		

Table 3 The results of the Spearman's Rho test showed a p-value of 0.244, which is greater than the established threshold of <0.05 . This can be concluded that there is no relationship between social support of multiparous mothers undergoing cesarean section and the risk of postpartum depression at Airlangga University Hospital. The correlation coefficient value indicates a moderate result ($r = -0.209$).

4. Discussion

4.1. The Relationship Between Social Support Perceived by Primiparous Mothers Undergoing Cesarean Section and the Risk of Postpartum Depression

The results of this study show that there is no relationship between the social support received by primiparous mothers with cesarean section and the risk of postpartum depression. This is in line with other studies that state that social support, including from close family and husbands, does not have a relationship with postpartum depression [23][24]. However, this study contradicts the research of Nurfitriana and Maizalza, which found that social support has a significant influence on postpartum depression. Mothers who received good social support had low EPDS scores, meaning that social support has a negative relationship with the occurrence of postpartum depression [25]. Nevertheless, there are still mothers with moderate and high social support who experience postpartum depression. This is because postpartum depression is a condition caused by many factors (multifactorial). Psychological disorders in postpartum mothers have a broad range, as do the risk factors, which are divided into sociodemographic, psychological, obstetric, and infant-related factors [23].

Furthermore, when looking at the characteristics of primiparous cesarean section mothers in this study, postpartum depression is related to the mother's occupation and who she lives with at home. According to the findings of this study,

primiparous cesarean section mothers tend to experience a higher risk of severe depression. Primiparous mothers experience more postpartum depression than multiparous mothers because becoming a mother and everything related to the baby is a new situation for them, which can cause stress [13][26]. A mother who gives birth to her first child may feel unprepared for the major life changes and her new role. Fear of caring for a newborn and uncertainty about the future can also increase the risk of baby blues in primiparas [27].

In this study, follow-up was conducted on primiparous cesarean section mothers at risk of postpartum depression, and some mothers were surprised and still needed to adapt to their role as new mothers. Primiparous mothers typically experience many difficulties during the role adaptation process of becoming a parent (bonding parenting) [24]. Some primiparous mothers expressed concerns about low breast milk production. This aligns with research stating that postpartum blues occur in mothers who face difficulties with breast milk production in the early postpartum period [28]. Another study also mentioned that negative early breastfeeding experiences can trigger higher depression symptoms at 8 weeks postpartum [29]. Some primiparous cesarean section mothers stated that social media triggered their concerns, and they felt tired and lacked rest due to frequently staying up late caring for their baby. Mothers can access any content on social media, and this exposure to negative content can cause anxiety. A study in China found that exposure to smartphones not only directly triggers postpartum depression but is also associated with delayed breastfeeding initiation and causes mothers to prefer formula feeding over breastfeeding [30]. Meanwhile, rest quality is a protective factor against postpartum depression in both primiparous and multiparous mothers. The lower the quality of rest, the higher the risk of postpartum depression, as lack of rest can affect emotional conditions [29][31]. In this study, there were mothers at risk of postpartum depression due to living with in-laws, who had different approaches to baby care compared to current practices. This aligns with research which states that culture can influence the occurrence of postpartum depression [32]. Social problems, such as conflicts with family or husbands can create additional stress for the mother, triggering postpartum blues [33]. This was also experienced by one of the respondents in this study, where, despite having high social support, conflicts with her husband still occurred, and this affected her emotional well-being during the postpartum period.

4.2. The Relationship Between Social Support Perceived by Multiparous Mothers Undergoing Cesarean Section and the Risk of Postpartum Depression

Based on the results of statistical analysis, there is no relationship between social support received by multiparous mothers with cesarean section and the risk of postpartum depression. This is consistent with previous studies that found no correlation between the incidence of postpartum depression and support from husbands or family [34]. The study results show that, although some multiparous cesarean section mothers received moderate to high levels of social support, they still experienced moderate to severe risks of postpartum depression. This aligns with research in China, which found that multiparity can indirectly lead to postpartum depression by influencing factors such as gestational hypertension, premature birth, birth weight, breastfeeding initiation and methods, as well as indirectly affecting infant weight at 4 weeks of age [30].

The study in China also mentioned significant differences in family, friends, and social support levels between primiparous and multiparous mothers. Multiparous mothers often do not receive the same level of social support as they did during previous pregnancies. For multiparous mothers, giving birth again presents a significant physical and psychological challenge because they already have responsibilities towards their older children [31]. So, although severe postpartum depression is less frequently observed in multiparous mothers, they are still at risk of experiencing postpartum depression due to new challenges, such as balancing attention between newborn and older children. Additionally, stress caused by additional responsibilities and economic uncertainty can also affect multiparous mothers [35]. The health of the newborn and the mother's expectations regarding the baby's gender can also be risk factors for postpartum depression in multiparous mothers [31].

This study also followed up on the condition of multiparous cesarean section mothers. One mother mentioned that the cesarean delivery process and healing from the surgical scar affected her psychological condition during the postpartum period. Cesarean section deliveries for medical reasons, which cause tissue trauma (physical), result in acute pain that can disrupt both physical and psychological conditions, leading to postpartum depression [36]. Postpartum depression in multiparous mothers can also be caused by the adaptation process in caring for a newborn and their previous children. Additionally, managing two or more children can lead to exhaustion, which may affect both physical and psychological conditions, triggering postpartum depression. The risk of postpartum depression due to social media exposure was also found in the multiparous group.

5. Conclusion

There is no relationship between the social support received by primiparous and multiparous mothers with cesarean section and the risk of postpartum depression at Airlangga University Hospital. This is because postpartum depression is a condition caused by multiple factors (multifactorial). Although the majority of primiparous and multiparous mothers with cesarean section receive high social support, both groups are still at risk of experiencing postpartum depression. Future research is expected to examine other risk factors for postpartum depression, such as psychological, physical, and biological factors, other sociodemographic factors, obstetric and pediatric factors, as well as cultural factors.

Compliance with ethical standards

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Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of ethical approval

This study has passed the ethical review and obtained approval from the Research Ethics Committee of Airlangga University Hospital with the number: 106/KEP/2024.

Statement of informed consent

Written informed consent was obtained from all participants prior to inclusion in the study. The confidentiality and anonymity of participants were strictly maintained throughout the research.

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