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## **Relationship of Social Support with Postpartum Depression in Sadewa Hospital Yogyakarta**

Evi Wahyuntari<sup>a\*</sup>, Mohammad Hakimi<sup>b</sup>, Ismarwati Ismarwati<sup>c</sup>

<sup>a,c</sup>*Aisyiyah University, Yogyakarta, Indonesia*

<sup>b</sup>*Gajah Mada University, Yogyakarta, Indonesia*

<sup>a</sup>*Email: evi.wahyuntari@unisayogya.ac.id*

### **Abstract**

Background: Postpartum depression affects 13-15% of new mothers. Postpartum depression has a significant negative impact on cognitive, social and development of children. Objectives: Knowing the relationship of social support with postpartum depression in Sadewa hospital. Methods: Observational study design with cross-sectional approach. The research sample for 14-21 days postpartum mothers who visited the Sadewa hospital. 108 respondents to fill out a questionnaire EPDS and SSQ. Analysis of the data using Spearman, Mann-Witney, and linear regression. Results: Postpartum depression prevalence of 35.2% (a score  $\geq 10$ ). Age and education were not associated with postpartum depression ( $p > 0.05$ ). Parity associated with postpartum depression ( $p < 0.005$ ). Postpartum depression associated with social support have a negative correlation with the strength direction moderate relationship ( $r = -0,58, p = 0.001$ ) with a score of EPDS 8 (0-15), while social support score of 41.5 (23-153). Conclusion: Postpartum depression associated with social support and direction of a negative relationship. Implementation of postpartum depression screening using the EPDS applied to all postpartum mothers for early detection of postpartum depression.

**Keywords:** Social support; postpartum depression; Edinburgh Postnatal Depression Scale.

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\* Corresponding author.

## **1. Introduction**

Postpartum depression affects 13-15% of new mothers. The incidence of postpartum depression occurs in developing countries with a prevalence of 10-15% [1]. In truth, more than 50% of postpartum depression is not diagnosed because of the stigma of people with mental disorders [2]. Genesis of the major postpartum depression to minor occurred 12% - 19% [3, 4]. Based on the WHO report (1999) will be women giving birth who experienced mild postpartum depression 10 per 1,000 live births and postpartum depression were 30-200 per 1,000 live births [5]. According to the American College of Obstetricians and Gynecologists (ACOG) and the American Academy of Pediatrics (AAP) retrospective study conducted by nursing find one among the seven women treated for depression during pregnancy and up to one year after childbirth [6].

Postpartum depression has a significant negative impact on cognitive, social and development of children. Baby in mothers with depression will experience cognitive delays, psychology, neurology and motor development [6, 7]. Based on the WHO depression is a major factor that causes disability and lost productivity woman and requires considerable expense for treatment. Postpartum depression also causes effects on the social and personal lives of new mothers. Such as the effects of maternal and infant relationship and the relationship marriage [1]. As well as interest and the interest of the baby less and less able to care for her child optimally including breastfeeding [8]. It is essential to identify risk factors for postpartum depression, especially in developing countries with some vast and young population [1].

Reporting incidence of postpartum depression varies widely around the world. Other studies found that the impact of postpartum depression in Canada conducted screening using the Edinburgh Postnatal Depression Scale (EPDS) is reported to be as high as 29% [9]. While developing countries like Qatar incidence of postpartum depression said as much as 18% to 36% [1]. The prevalence of postpartum depression in Asian countries range from 3.5% -63.3% were grouped into five risk factors include physical / biology, psychology, obstetrics, socio-demographic and cultural [10].

Factors causing postpartum depression include the previous history of depression, social support, marital relationship, obstetric factors (sectio cesarian, delivery by the tool) [2, 11]. Based on these factors, social support is a major factor that led to the postpartum depression. Social support is a form of attention, appreciation and help other people feel or groups that can serve as a tool to make adjustments to stress, consist of several types of emotional support, esteem support, instrumental support and information support [12]. The influence of social support can affect a person psychologically.

Women in the postpartum period require social support from people who are nearby to adjust to its new role as a mother. The lower the social support that it receives, the higher the incidence of postpartum depression. Women who receive social support will get a low score on the impact of depression, which means that social support has a negative correlation to the impact of depression postpartum, where mothers get social support, lower experiencing postpartum depression [13,14,15,16,17]. Social support research conducted in Indonesia showed the same results. In Yogyakarta get the results of the prevalence of postpartum depression by 24.6%, social support, income, parity had no significant relationship with the occurrence of postpartum depression [18].

The purpose of this study was to determine the risk factors of postpartum mothers within the first two weeks of delivery and determine the relationship of social support with postpartum depression in Sadewa hospital Yogyakarta.

## **2. Materials and Method**

### **2.1. Collection of Samples**

An observational study design with cross-sectional approach. The population in the study were postpartum mothers who give birth spontaneously and childbirth section Cesarean who visit the hospital Sadewa Hospital Yogyakarta. Women with a history of depression before giving birth to twins, and complications in the mother and or the baby (pre-eclampsia/eclampsia, postpartum infection, weight <2500 g) were excluded from the sample because it increases the risk of postpartum depression (Heh and his colleagues (2004); Robertson and his colleagues (2004)). Consecutive sampling technique using sampling with a sample of 108 respondents (with a value of 5% error type  $\alpha$ ,  $\beta$ -type errors by 20% and the strength of the relationship ( $r$ ) = 0.25). The data collection was conducted in November-December 2016. Researchers do research every Friday during the visit of repeated and BCG immunization and taking samples by the inclusion criteria. All respondents get informed consent verbally and then sign it.

### **2.2. Instrument**

The research instrument includes demographic data questionnaire developed by researchers, *Postnatal Edinburgh Depression Scale* (EPDS) [20] and the Social Support Questionnaire (SSQ) [21]. Data collected included age, education, parity, social support during the postpartum period. EPDS is used to detect the symptoms of postpartum depression in mothers in the postpartum period. Consists of 10 items EPDS scores range from 0-30, High scores indicate high psychological stress. Value sensitivity 86%, specificity 78% and positive predictive value of 73%, with the value of the error rate reported between 14-16% [22]. SSQ is used to measure a good social support from family, friends, and others. There are 27 items of questions, each question there are two answers include support quantity and quality of social support. Scores range from 0-243 to support quantity and support quality using a Likert scale 1-6 with a score range 1-162. Yogyakarta reliability figures are quite high ( $r = 0.986$ ,  $p < 0.001$ ) Ismanto (1999) Kristianto (2015)

### **2.3. Data Analysis**

Analysis of the data using a computer. For nominal data views frequencies and percentages, medians and minimum value-maximum. Statistical data using Mann-Whitney and Spearman. To see correlations between variables and other variables associated with postpartum depression and see the predicted value, using linear regression analysis, significant if  $p < 0.05$ .

### **2.4. Ethical Clearance**

Ethical approval for this study was obtained from Research Ethics Committee, 'Aisyiyah University, Yogyakarta, Indonesia. Number; 07/KEP-UNISA/X/2016.

### 3. Results

A total of 108 respondents by the criteria for inclusion into the study respondents agreed and completed questionnaires

**Table 1:** Characteristics of respondents

characteristics	Number	percentage
<b>Age</b>		
< 20 years or > 35 years	16	14.8
20-35 years	92	85.2
<b>Level of education</b>		
Low	16	14.8
High	92	85.2
<b>parity</b>		
multiparas	52	48.1
primiparas	56	51.9
<b>types Childbirth</b>		
Action	58	53.7
Spontaneous	50	46.3

According to the table. 1 is known that most respondents of reproductive age range are 20-35 years as many as 92 people (85.2%). The education level of mothers in the high category, above the SMA as many as 92 people (85.2%). Also note also the mother parity primigravid majority, i.e., 56 (51.9%). Type RS KIA Sadewa labor in 58 (53.7%) of respondents with labor action and 50 (46.3%) of respondents with spontaneous labor.

**Table 2:** Spearman correlation analysis of social support relationship with postpartum depression

	<b>EPDS</b>		
	<b>n</b>	<b>r</b>	<b>p</b>
<b>Social support Quantity (Total)</b>	108	-0.368	0.001
Emotional Support	108	-0.406	0.001
Choice Support	108	-0.295	0.002
Support Information	108	-0.349	0.001
Instrumental Support	108	-0.280	0.003
<b>Social support Quantity (Total)</b>	108	-0.211	0.028
Emotional Support	108	-0.230	0.017
Choice Support	108	-0.225	0.019
Support Information	108	-0.209	0.030
Instrumental Support	108	-0.189	0.028

Spearman correlation test with, in getting the quantity of social support scores obtained p-value <0.01 means that a correlation score of the number of social support and depression significantly. Spearman correlation value of -0.368 showed a negative correlation with the strength of the relationship is weak. While the correlation tests the quality of social support and postpartum depression p-value <0.03 means that the correlation of social support quality scores with significant depression. Spearman correlation value of -0.211 showed a negative correlation with the strength of the correlation is weak. Another variable relationship with social support and postpartum depression seen in Table 3.

**Table 3:** Analysis of other variables Whitney Mann with social support and postpartum depression.

Factor	EPDS median (Minimum- Maximum)	p-value	Social Support (Quantity) median (Minimum- Maximum)	p-value	Social Support (Quality) median (Minimum- Maximum)	p-value
Age						
<20th or> 35 years	8.50 (0-14)	0.825	32,00 (24-99)	0,201	135,00 (121-162)	.882
20-35 years	8.00 (0-15)		43,00 (23-153)		135,00 (121-162)	
Level of education						
Low	10.5 (2-14)	0.068	25,00 (24-75)	0,001	135,00 (135-162)	.748
High	8.00 (0-15)		45.50 (23-153)		135.00 (121-162)	
parity						
multiparas	7.00 (0-13)	0.028	41,50 (23-103)	.774	135,00 (122-162)	.873
primiparas	9.00 (0-15)		41,50 (23-153)		135,00 (121-162)	

Based on Table 3 is known that the parity associated with EPDS score with p-value <0.005. The level of education-related social support dozens of quantity (p <0.05).

After being tested bivariate variables only age who do not meet the criteria for entry in the multivariate analysis. The test results are shown in Table 5 Multivariate

**Table 5:** Multivariate linear regression analysis of the factors associated with postpartum depression

Model	Coefficient	Chief CI	p-value
	B		
1	intercept	17.546	0.001
	The quantity of social support	-0.77	0.001
		-0.065 - (-0.017)	
	The quality of social support	-0.04	0.035
		-0.103 - (- 0.04)	
2.	intercept	17.892	0.001
	The quantity of social support	-0.036	0.005
		-0.061 - (- 0.011)	
	The quality of social support	-0.054	0.027
		-0.102 - (- 0.006)	
	Education	-1.166	0.187
		0.877	
		-2.906-0. 574	
	parity	1.782	0.004
		0.605	
		0.583 to 2.981	

EPDS:  $R^2 = 22.4$

Based on multivariate analysis obtained Table 5 factors related to postpartum depression is social support and parity, with a value of  $R^2 = 22.4\%$ , which means that the ability of social support score and parity effect on postpartum depression was 22.4%.

#### 4. Discussion

This study aims to determine the relationship of social support and postpartum depression in Sadewa Hospital Yogyakarta. The results showed the relationship between social support and postpartum depression with p-value = 0.001 and  $r = -0.59$ . The prevalence of postpartum depression in Sadewa Hospital at 35.4%. Postpartum depression in each area varies depending on the culture, the larger the sample, the time to diagnose and cut point (cut off). Other research found that the prevalence of postpartum depression by 24.6% [18]. Our study was supported by an earlier study that in Asian country the prevalence of postpartum depression between 3.5% to 63.3% [10].

Support for a maternal postpartum maternal role in mental health by helping mothers during the transition period. The results of this study show that postpartum depression is influenced by the social support received and the quality of support is felt. Social support can come from various sources such as community or professional and can be in any form [23]. Social support is the force that will affect individual concepts, attitudes, and behavior [21].

Previous research has found that the increase in social support score was associated with lower incidence of postpartum depression, as research conducted by Corrigan and his colleagues [23] that mothers with high social support scores affect levels of depression ( $r = -0.39$ ;  $p = 0.002$ ) and with reduced social support are risk factors for the development of postpartum depression. In general, social support can improve the confidence and trust to perform the role as a mother [16].

Research conducted by Ege and his colleagues (2008); Robertson and his colleagues (2004); Yagmur & Ulukoca (2010) statistically significant correlations between social support and postpartum depression with the direction of the negative relationship that mothers who receive social support may reduce the risk of postpartum depression [17,11,16]. Aspects of quantity influence social support, and quality aspects of social support [21], The more people who provide social support and level of satisfaction satisfied or very satisfied then the social support received by someone ranked high.

Theory of direct effect hypothesis by Gottlieb [24] that high stress and low intensity compared with positive support, the higher the social support received by individuals, increasingly have the confidence that makes people not to stress. Theory buffer hypothesis [24] serves as a protector someone from the negative effects of stress. High social support will change the individual response to the sources of stress by sharing stories on other people who are considered to provide social support.

Sources of social support can come from family, friends, friends, neighbors and health workers [5]. Various

sources of social support, the support is most meaningful to respondents is family support. The family is the closest, provide support with a sense of security, being genuine, always accompany the mother, not blame [25]. Husband's role is critical to minimize the incidence of postpartum depression.

Four dimensions of social support include emotional, social support, instrumental, informational and awards [26]. Emotional support can be understanding, a sense of comfort, love, empathy belief that the mother to be comfortable, feel cared for and are not alone in facing the changes in his life. Instrumental support can be money, time, a real relief as help baby care, household chores [12], Informational support in the form of health education, to share experiences. In this study, four dimensions of social support have a statistically significant relationship with postpartum depression.

Based on this research, the quantity of emotional support had the strongest relationship strength than instrumental support, appreciation and informational with the relationship being. Emotional support is found to be related to the mental health of postpartum mothers. With the emotional support, and informational instrumental will facilitate coping and adaptation mechanisms of the body to stress. This study suggests previous study that the incidence of depression among women who have little support gives number [18]. Emotional support makes the mother feel comfortable, loved to face the existing problems. Postpartum mothers need all forms of social support to make it through the transition and can perform the role as a mother. In the postpartum period, women experience changes in hormones that affect mood changes/emotions such as fear of taking care of children; it is easy to cry for no apparent reason, breast milk does not come out that can cause emotional stress. Therefore we need emotional support, instrumental, informational, husband, family, friends, and health professionals.

## **5. Conclusion**

Social support is related to the incidence of postpartum depression with a negative correlation direction, the strength of the relationship was significant that the higher the social support, the lower the score of postpartum depression.

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## **Footnote**

*Conflicts of Interest:* The authors have no conflicts of interest to declare

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