

Risk Factors of Postpartum Depression

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ABSTRACT

Postpartum depression is a relatively severe depression that occurs after delivery. The purpose of this study is to analyze the influence of maternal factors and social support on postpartum depression. This study used a cross-sectional design. The population was postpartum mothers in Ngariboyo, Magetan Regency with a sample size of 100 respondents. Samples were taken by consecutive sampling. Data were collected with the Indonesian version of the EPDS questionnaire and husbands' social support. Data were analyzed using logistic regression test. The prevalence of postpartum depression in Ngariboyo Community Health Center, Magetan used the EPDS were 49 mothers (49%). The result of this research showed that there risk factors for depression in the postpartum mother were parity, work, and support of the husband. The most influential factor was parity ($p = 0.004$; OR 3.709). The conclusion of this research was the smaller of parity, the higher the risk of postpartum depression. Working mothers were the higher of the risk of postpartum depression. The lower the husband support, the higher the risk of postpartum depression. Counseling during pregnancy with the involvement of husbands needs to be improved as an effort to prevented postpartum depression.

Keywords: age; parity; work; husband support; postpartum depression

INTRODUCTION

Background

The process of pregnancy, childbirth and becoming a mother are female physiologists. This event is a transition period of a woman's life. This period was a very happy time for almost everyone. However, some assume that the transition period is an unpleasant thing, and a time when women are at high risk for experiencing mood disorders, even physical and emotional stress that causes an anxiety state to depression. Postpartum depression is a depression that is relatively severe and arises after childbirth⁽¹⁾ More than 80% of women after childbirth experience some form of symptoms of postpartum depression, which is commonly known as "baby blues" or sadness due to the presence of children. This mild symptom of depression is often temporary and disappears without treatment. But 7 to 26% of women, experience increased symptoms of depression, stay for a long time and need special treatment. In developing countries, the prevalence ranges from 5-25%.⁽²⁾

About 10%-15% of postpartum mothers in the first year experience depression postpartum. Younger mothers are more susceptible to this. Based on results from the Centers for Disease Control and Prevention (CDC) the prevalence of postpartum depression ranges from 11.7% to 20.4%.⁽³⁾ If this condition is not treated properly, it can develop into postpartum psychosis with a prevalence of 0.1-0.2%.⁽⁴⁾ Postpartum depression is caused by several factors, namely demographic factors, psychosocial, a history of affective disorders and hormonal changes.⁽⁵⁾ A study of the differences in the risk of postpartum depression between primiparous and multiparous mothers conducted at RSIA 'Aisyiyah Klaten in 2010, with a total of 44 respondents found that the incidence of postpartum depression risk in primiparous and multiparous women differed by age. Primiparous women are vulnerable to the risk of postpartum depression at a younger age than multiparous mothers.⁽⁶⁾

Research conducted in Boyolali in 2008 by taking a sample of 30 respondents about social support with postpartum depression events showed that the higher the social support received by mothers, the lower the level of depression⁽⁷⁾. Based on the results of research conducted in 2009 on 50 spontaneous postpartum mothers in the inpatient ward of RSUP. Haji Adam Malik Medan found results of postpartum women who received postpartum depression syndrome as much as 16% and those who did not experience postpartum depression as much as 84%.⁽⁸⁾

The health profile of Magetan District in 2015 stated that postpartum service coverage was 94.6%. Appropriate postpartum care will minimize the risk of abnormalities or even postpartum maternal deaths. Postpartum services include the examination of general conditions, lochea, vaginal discharge, breast examination and recommended exclusive breastfeeding and vitamin A capsule administration. Services given in the postpartum period are still limited to the physical postpartum mothers. Though mothers in the postpartum period also experience psychological changes, which allows a tendency for postpartum depression. In basic

health care facilities (community health center) there is no specific screening for postpartum depression, only limited if there are postpartum mothers who are suspected of having experienced referral immediately.⁽⁹⁾ The number of deliveries at the Ngariboyo Community Health Center in 2015 was quite a lot, namely 502 deliveries so that the monthly average was 40 deliveries. With a large number of deliveries, the incidence of postpartum depression tends to be present.

Goal

The purpose of this study is to analyze the influence of maternal factors and social support on postpartum depression.

Hypothesis

The hypothesis in this study were: 1) maternal factors (age, parity, education and work status) affect postpartum depression; 2) husband support affect postpartum depression

METHODS

This study used a cross-sectional design. The population was postpartum mothers in the Ngariboyo Subdistrict area, Magetan Regency. The sample size was 100 respondents, selected using consecutive sampling. The independent variables in this study were maternal characteristics (mother’s age, parity, education, and employment status) and husband support. The dependent variable in this study was postpartum depression. Data were collected by using questionnaire of the Indonesian version of the EPDS and husband's social support, conducted from July to September 2017. Data categorical data were presented in table of frequency, then analyzed using logistic regression test.

RESULTS

Characteristics of Respondents

Characteristics of respondents, mostly age 20-35 years, multipara, basic education, and does not work. For clear information could be remained in table 1.

Table 1. Distribution of respondents characteristics

Characteristics of Respondents	f	%
Mothers Age (years)		
20-35	81	81
≥ 36	19	19
Total	100	100
Parity		
Primipara	40	40
Multipara	60	60
Total	100	100
Education		
Basic	87	87
High	13	13
Total	100	100
Work		
Work	41	41
Does not work	59	59
Total	100	100

Husband support

The husband support was mostly high. For clear information could be remained in table 2.

Table 2. Distribution of husband support

Husband Support	f	%
Low	44	44
Height	56	56
Total	100	100

Postpartum Depression

Nearly half of the respondents experienced postpartum depression. For clear information could be remained in table 3.

Table 3. Distribution of postpartum depression

Postpartum depression	f	%
Depression	49	49
Not depressed	51	51
Total	100	100

Risk Factors for Postpartum Depression

The variables of parity, work, and husband support were risk factors for depression in postpartum mothers with a value of $p < 0.05$. For clear information it could be remained in table 4.

Table 4. Relationship between respondent characteristics and husband support with postpartum depression

Variable	Postpartum depression				p	OR	IK 95%	
	Yes		No				Min	Max
	f	%	f	%				
Mother's age (years)								
20-35	40	81.6	41	80.4	0.874	1.084	0.399	2.948
≥ 36	9	18.4	10	19.6				
Total	49	100	51	100				
Parity								
Primipara	28	57.1	12	23.5	0.001	4.333	1.835	10.235
Multipara	21	42.9	39	76.5				
Total	49	100	51	100				
Education								
Basic	41	83.7	46	90.2	0.332	0.557	0.169	1.838
High	8	16.3	5	9.8				
Total	49	100	51	100				
Work								
Work	27	55.1	14	27.5	0.005	3.224	1.409	7.466
Does not work	22	44.9	37	72.5				
Total	49	100	51	100				
Husband support								
Low	27	55.1	17	33.3	0.028	2.455	1.092	5.517
Height	22	44.9	34	66.7				
Total	49	100	51	100				

From the variables of age, parity, education, work and support of husbands who fulfill the requirements for logistic regression testing were variables of parity, work and husband support. 24% of postpartum depression were influenced by variables of parity, work and husband support. The rest (76%) were influenced by other variables. The most influential variable on depression in postpartum mothers was parity, with OR 3.709. For clear information, it could remain in table 5.

Table 5. Effects of parity, work and husband support on postpartum depression

Variable	Coefficient of determination	Regression coefficient	P	Or (ik 95%)
Parity		1.311	0.004	3.709 (1.506-9.131)
Work		0.897	0.050	2.451 (1.002-5.996)
Husband support		0.776	0.084	2.178 (0.900-5.237)
	0.240			
Constant		-1.256		

DISCUSSION

Prevalence of Postpartum Depression

Postpartum depression is a depression that is relatively severe and arises after childbirth⁽¹⁾. The prevalence of postpartum depression in Ngariboyo Community Health Center, Magetan using the EPDS was 49%. The results of this study were influenced because most respondents were aged 20-35 years, with multiparous parity, basic education level and not working. The results of this study were different from the research conducted in RSUP Haji Adam Malik Medan who got a result of 16% experienced postpartum depression syndrome and who did not experience postpartum depression by 84%.⁽⁶⁾ The results of the study in Nias Regency North Sumatera amounted to 48.9% in the control group not experiencing depression and 51.1% experiencing depression, respondents in the case group 87.5% did not experience depression and 12.5% experienced postpartum depression.⁽¹⁰⁾

The Effect of Age on Postpartum Depression

Based on result, respondents who experienced depression at the age of 20-35 years were 81.6%. Statistical tests showed no significant relationship between age and postpartum depression. Mothers aged 20-35 years have a possibility of 1,084 times experiencing depression compared to mothers aged ≥ 36 years. The results of this study are the same as the research conducted by Nielsen which found a prevalence of 34.6% of those who experienced postpartum depression in the age group 30-34 years.⁽¹¹⁾ The research conducted by Sari obtained results were the age group most experienced depression 25-29 years and 30-34 years.⁽⁶⁾ Age is one of the factors that have an important influence on the incidence of depression. The age of postpartum mothers is often associated with the mental readiness of being a mother. Most young mothers do not have physical readiness and have unstable emotions. While mothers over the age of 35 are considered at high risk for complications during pregnancy, childbirth and health problems during the postpartum period.⁽¹²⁾

The results of this study indicate that postpartum mothers with healthy reproductive age are most depressed. This is not in accordance with the theory which states that the age of healthy reproduction is the best period in which the mother has both physical and psychological readiness in facing pregnancy, childbirth and childbirth periods. In this study, most of the respondents were primiparous mothers, so they did not have experience in self-care and babies in the postpartum period. Some studies show that primiparas are more susceptible to depression than multiparas

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The Effect of Parity on Postpartum Depression

Based on result, respondents who experienced depression in primiparous mothers were 57.1%. Statistical tests showed that there was a significant relationship between parity and the incidence of postpartum depression. Primiparous women have possible 4,333 times depressed compared to multiparous mothers. Parity is a factor that influences the incidence of postpartum depression. Sinaga stated that based on parity, the percentage of primiparous mothers was slightly more likely to be depressed (33.3%) than multiparous women (23.7%).⁽¹³⁾ Sari states that primiparous mothers are vulnerable to the risk of postpartum depression at a younger age compared to multiparous mothers.⁽¹⁴⁾ Rusli, et al. concluded that there was no difference in postpartum depression in primiparous mothers in terms of the age of middle teens and early adolescents.⁽¹⁵⁾

The results of this study are following the theory which states that postpartum depression is more common in first-time mothers (primipara) because the role of a mother and everything related to her baby is a situation that is new to her and can cause stress.⁽¹⁶⁾ This is in line with the theory which states that psychological and physical stress associated with new obligations as mothers can lead to emotional crises which ultimately hinder the mother's adaptation to the role of the mother.⁽¹⁷⁾

The results of this study indicate that primiparous mothers are more prone to depression than multiparas. This is supported by the age factor, most of them are young. Young age with the first child is related to the readiness to undergo the role of a mother. They tend to not have experience in caring for babies, it will require an adaptation process, which causes susceptibility to postpartum depression.

The Effect of Education on Postpartum Depression

Based on result, respondents who experienced depression in mothers with a primary education level of 83.7%. Statistical tests showed no significant relationship between education and the incidence of postpartum depression. Mothers with basic education have a possibility of 0.557 times experiencing depression compared to mothers with higher education.

The results of this study are in line with the research conducted by Soep which showed mothers who experienced postpartum depression were those with low education (61.1%).⁽¹⁸⁾ Kurniasari & Astuti concluded that there was a significant relationship between education and the incidence of post-partum blues at Ahmad Yani Metro General Hospital in 2014.⁽¹⁹⁾ Respondents with low education had an opportunity of 2.625 times greater to experience postpartum blues. Kurniasari & Astuti explained in his research that mothers who have primary level education had a tendency to experience maternity blues once (OR = 1). While mothers who have a high level of education (high school/college) have a tendency to experience maternity blues as much as 0.84 (OR = 0.84).⁽¹⁹⁾

Education is an effort to improve the quality of human resources that can influence other people, individuals, and groups. The higher the level of education, the higher the level of knowledge. The high level of knowledge will influence prevention efforts and awareness of the need for attitudes to live a healthy life. The level of education is a predisposing factor for a person to behave so that educational background is a very basic factor to motivate health behavior and become a reference for one's learning.⁽²⁰⁾

The results of this study indicate that mothers with primary education are mostly depressed. Most of the respondents in this study have equivalent education in secondary education (SLTA). This is related to openness and ease in receiving information about self-care and postpartum babies. Mothers with basic education tend to be less realistic in solving problems, besides they tend to be less able to cope with depression.

The Effect of Work on Postpartum Depression

Based on result, respondents who experienced depression in mothers with working as much as 55.1%. Statistical tests showed that there was a significant relationship between work and the incidence of postpartum depression. Working mothers have a possibility of 3.224 times experiencing depression compared to mothers who do not work. The results of this study are similar to the theory which states that working mothers are more susceptible to postpartum depression because they have to adjust to their work activities after having children.⁽¹¹⁾ The results of this study indicate that working mothers tend to experience depression. The working mother is likely to have a lot of pressure or burden, in addition to the burden of obligation as a mother and workload. So that they tend to experience difficulty in adjusting to becoming a mother in self-care and her baby.

The Effect of Husband Support on Postpartum Depression

Based on result, respondents who experienced depression in mothers with low husband support were as much as 55.1%. Statistical tests showed a significant relationship between the husband support and the incidence of postpartum depression. Mother with low husband support has a possibility of 2.455 times experiencing depression compared to mothers with high husband support. Support in this study is the support given by the husband after the mother gives birth. The husband support in this study included emotional, instrumental, informational and appraisal support. Of the three-supports emotional support, informational and appraisal were mostly high. Social support has an influence in reducing depression experienced by postpartum mothers. A woman who feels valued, cared for and loved by her family certainly will not feel worthless so one characteristic of someone who is depressed can be inhibited. Dewi states that the higher the social support received by the mother, the lower the level of depression.⁽⁷⁾

The condition of the mother after delivery requires special attention. Mothers need a process of self-adjustment both physically and psychologically recoveries to normal conditions. In addition, a mother needs support to prepare herself for a new role as a mother to care for and raises the baby. The results of this study are supported by the characteristics of the majority of primiparous respondents and young people, so they get high attention and support from their husbands. The higher the husband support, the smaller the risk factors for postpartum depression.

The Most Influential Factors of Postpartum Depression

From the variables of age, parity, education, work and support of husbands who fulfill the requirements for logistic regression testing are variables of parity, work and husband support. 24% of postpartum depression is influenced by variables of parity, work and husband support. The rest (76%) is influenced by other variables.

The variable that most influenced depression in postpartum mothers was parity. Primipara mothers have a possibility of 3,709 times depression compared to multiparous mothers. The smaller the parity, the higher the risk of postpartum depression. Parity is a factor that influences the incidence of postpartum depression. Sinaga stated that based on parity, the percentage of primiparous mothers was slightly more likely to be depressed (33.3%) than multiparous women (23.7%).⁽¹³⁾ Sari stated that primiparous mothers are vulnerable to the risk of postpartum depression at a younger age compared to multiparous mothers. Besides, primiparous mothers do not have enough experience to become a mother.⁽¹⁴⁾

Work has an effect on depression in postpartum mothers. Working mothers have a probability of 2.451 times experiencing depression compared to mothers who do not work. Working mothers are at risk of postpartum depression. The results of this study are similar to the theory which states that working mothers are more susceptible to postpartum depression because they have to adjust to their work activities after having children.⁽²¹⁾ Husband support affects depression in postpartum mothers. Mother with low husband support has a possibility of 2,178 times experiencing depression compared to mothers with high husband support. The lower the husband support, the higher the risk of postpartum depression. A woman who feels valued, cared for and loved by her family certainly will not feel worthless so one characteristic of someone who is depressed can be inhibited. Dewi's research (2008) states that the higher the social support received by the mother, the lower the level of depression.⁽⁷⁾

CONCLUSION

The research conclusions are: The prevalence of postpartum depression in Ngariboyo Community Health Center, Magetan using the EPDS is 49 mothers (49%). The influence factors of depression in postpartum mothers are parity, work and husband support; The smaller of the parity, the higher of the risk of postpartum depression; Working mothers are taking the higher risk of postpartum depression; The lower of the husband support, the higher to the risk of postpartum depression.

Counseling needs to be improved for the woman to prepare herself to become a mother from the time of pregnancy and involving the family, the most important is the husband has to support his wife during pregnancy. In further research, it is necessary to examine more deeply how to prevent depression in postpartum mothers by paying attention to the factors of parity, work and husband support.

REFERENCES

1. Seminum Y. *Mental Health 2 (Kesehatan Mental 2)*. Yogyakarta: Kanisius; 2006.
2. Mancini F, Carlson C. Use of the Postpartum Depression Screening Scale in a Collaborative Obstetric Practice. *J Midwifery Womens Heal*. 2007;52(5):429–34.
3. Barclay L. *Medscape Medical News: Prevalence of Self-Reported Postpartum Depressive Symptoms Ranges From 11.7 to 20.4%*. 2008;57(14):361–366.
4. Joy S. *Postpartum Depression*. 2010. Available from: www.medscape.com
5. Gausia K, Fisher C, Ali M, Oosthuizen J. Magnitude and contributory factors of postnatal depression: a community-based cohort study from rural subdistrict of Bangladesh. *Psychol Med*. 2009;3(9):999–1007.
6. Sari LS. *Postpartum Depression Syndrome in Haji Adam Malik Hospital Medan (Sindroma Depresi Pasca Melahirkan di RSUP Haji Adam Malik Medan)*. 2009;
7. Dewi EP. *The Relationship Between Social Support and the Depression Event in Mother Post Partum in the Working Area of Ngemplak Boyolali Health Center (Hubungan Antara Dukungan Sosial Dengan Kejadian Depresi Pada Ibu Post Partum Di Wilayah Kerja Puskesmas Ngemplak Boyolali)*. Surakarta: UMS; 2008.
8. Kusumadewi I, Irawati R, Elvira S, Wibisono S. Validation Study of the Edinburgh Postnatal Depression Scale. *Indonesian Psychiatric Quarterly*, XXXI, 2: 99–110. In: Sari, Laila Sylvia. *Postpartum Depression Syndrome at the Adam Malik Haji Central Hospital Medan (Sindroma Depresi Pasca Melahirkan Di Rumah Sakit Umum Pusat Haji Adam Malik Medan)*. 2009.
9. Magetan District Health Office. *Health Profile of Magetan Regency in 2015 (Profil Kesehatan Kabupaten Magetan tahun 2015)*. Magetan: Magetan District Health Office ; 2016.
10. Nazara Y. Effectiveness of Psychoeducation of Postpartum Depression (a study in health services in subprovince Nias, North Sumatera) (Efektifitas Psikoedukasi Depresi Pasca Persalinan). *Indones J Obstet Gynecol*. 2009;33(4).
11. Forman DN, Videbeck, Senior MH, Salvig JD, Secher NJ. *Postpartum depression: Identification of Women at Risk*. 2000;107:1210–7.

12. Hurlock. Developmental psychology (*Psikologi Perkembangan*). Jakarta: EGC; 2002.
13. Sinaga R. G. Overview of Screening Postpartum Depression in Postpartum Women Using EPDS at H. Adam Malik Hospital and Dr. Pirngadi Medan (Gambaran Srinings Depresi Postpartum pada Wanita Postpartum dengan Menggunakan EPDS di RSUP H. Adam Malik dan RSUD Dr. Pirngadi Medan). Medan: FK USU; 2014.
14. Sari ME. Differences in the Risk of Postpartum Depression between Primipara and Multipara in the Aisyiyah Hospital in Klaten (Perbedaan Risiko Depresi Postpartum antara Ibu Primipara dengan Multipara di RSIA Aisyiyah Klaten). Surakarta: UMS; 2010. Available from: <http://etd.eprints.ums.ac.id/9449/>
15. Rusli A, Meiyuntariningsih T, Warni E. Differences in Postpartum Depression in Primipara Mothers Viewed from Age of Pregnant Women (Perbedaan Depresi Pasca Melahirkan Pada Ibu Primipara Ditinjau Dari Usia Ibu Hamil'. *J Penelit Insa*. 2015;13(1):21–31.
16. Kruckman. Maternity Nursing: Family, Newborn and Womens Health Care, Education (18th ed). Philadelphia: Lippincott Dalam Soep., 2009. Effects of Pseudo-educational Interventions in Overcoming Postpartum Depression in RSU DR. Pirngadi Medan (Pengaruh Intervensi Pseudoedukasi Dalam Mengatasi Depresi Postpartum Di RSU DR. Pirngadi Medan). Medan: USU; 2001. Available from: <http://repository.usu.ac.id/bitstream/123456789/6885/1/09E01429.pdf>
17. Bobak IM, Lowdermilk DL, Jensen MD. Maternal Nursing. California: Mosby; 2004.
18. Soep. Effect of Psychoeducation Interventions in Overcoming Depression (Pengaruh Intervensi Pseudoedukasi Dalam Mengatasi Depresi. 2009.
19. Kurniasari D, Astuti YA. Relationship Between Maternal Characteristics, Baby Conditions And Husband's Social Support With Postpartum Blues In Mothers With SC Labor At Ahmad Yani Metro General Hospital in 2014 (Hubungan Antara Karakteristik Ibu, Kondisi Bayi Dan Dukungan Sosial Suami Dengan Postpartum Blues Pada Ibu Dengan Persalinan SC Di Rumah Sakit Umum Ahmad Yani Metro Tahun 2014). *J Kesehat Holistik*. 2015;9(3):115–25.
20. Notoadmodjo S. Education and Health Behavior (Pendidikan dan Prilaku Kesehatan.). Jakarta: Rineka Cipta; 2007.
21. Simpson JA, Campbell L, Rholes WS. Adult Attachment, The Transition To Parenthood, And Depressive Symptoms. *J Personal Soc Psychology*. 2003;87:1172–87.