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Analysis of Risk Factors for Postpartum Depression in Postpartum Mothers

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Abstract

Postpartum depression is a non-psychotic mood disorder that usually occurs 6-8 weeks after giving birth, experienced by 10-15% of women worldwide. Postpartum depression can cause disruption of the mother-child relationship, lack of maternal attention in caring for, nurturing, and raising her child, difficulty for children in establishing social relationships with the environment and peers, behavioral problems and lack of cognitive abilities in children, and marital conflict. This research employed a cross-sectional survey and statistical analysis of binary logistic regression. The population was postpartum mothers in the working area of Abeli Public Health Center. The sampling technique was purposive sampling, which consisted of 33 postpartum mothers. This research used the Edinburgh Post-natal Depression Scale (EPDS). Maternal age at high risk (< 20 years and > 35 years) was 1 times more risk than age at low risk (20-35 years), primipara was 0.95 times more at risk than multipara, secondary education was 0.2 times more at risk compared to higher education, family income that did not match the regional minimum wage was 0.3 times more at risk, and vaginal delivery was 2.5 times more at risk compared to delivery by Caesarean Section, experiencing postpartum depression. Maternal age, education, type of delivery, family income, and parity were risk factors for postpartum depression in postpartum mothers. Vaginal delivery had the greatest risk of experiencing postpartum depression.

1. INTRODUCTION

Postpartum depression is a mood disorder that occurs after giving birth. Postpartum depression is a common problem and is a non-psychotic mood disorder that usually occurs 6-8 weeks after giving birth. Several other literatures mention that postpartum depression occurs 4-6 weeks after giving birth. The characteristics of postpartum depression are feelings of depression, excessive anxiety, insomnia, and weight changes (Fadhiyah et al., 2021).

The incidence of postpartum depression is 1 to 2 per 1000 births. About 50% to 60% of women experience postpartum depression when they have their first child, and about 50% of women who experience postpartum have a family history of mood disorders. The prevalence of postpartum depression globally is between 10-15%. The incidence of postpartum depression in Asia is quite high and varies between 26-85%, while in Indonesia, the incidence of postpartum depression is between 30%-60% of postpartum women (Mustofa et al., 2021).

Potential risk factors for postpartum depression: sociodemographic factors, obstetric factors,

and marital factors. Some of the causes of postpartum depression are poverty, bad relationships with mothers-in-law, giving birth to a baby with a female gender, unplanned pregnancy, susceptibility to psychiatric symptoms, hospitalized babies, unemployed husband, and serious disputes with one of the family members. The survey above is conducted in developing countries (India and Pakistan), which still have strong cultural influences (Gausia K. et al; 2009).

The prevalence of postpartum depression globally is between 10%-15%. In countries such as Singapore, Malta, Malaysia, Austria, and Denmark, there are few reports of postpartum depression. While in other countries such as Brazil, Guyana, Costa Rica, Italy, Chile, South Africa, Taiwan, and Korea reports of postpartum depression symptoms are very common (Motzfeldt, 2013). According to research conducted by Cindy in Canada, 8% showed symptoms of depression for 12 weeks in the postpartum period (Dennis C.L., 2013). The incidence of postpartum depression in Asia is quite high and varies between 26%-85%, while in Indonesia, the incidence of postpartum depression is between 50%-70% of postpartum women (Maulana, 2008).

Due to the huge impact on the incidence of postpartum depression for both mothers and babies, it is necessary to conduct screening of risk factors for postpartum depression in postpartum mothers in the working area of Abeli Public Health Center. The risk factors to be studied include the number of deliveries (primiparous and multiparous), maternal age, maternal education level, family income, and type of delivery.

2. METHODS

This research employed a cross-sectional survey and statistical analysis of binary logistic regression. The population was postpartum mothers in the working area of Abeli Public Health Center in July and August 2024. The sampling technique was purposive sampling, with the inclusion criteria being mothers who gave birth less than 8 weeks, were able to communicate well, and were willing to be respondents. The exclusion criteria were postpartum mothers who experienced mental disorders. The sample used in this research was 33 postpartum mothers.

The variables studied were independent variables in the form of postpartum depression, which was measured using the Edinburgh Post-natal Depression Scale (EPDS). Meanwhile, the dependent variables were maternal age, parity, education level, type of delivery, and family income obtained through interviews or filling out questionnaires on respondent demographic data. Based on these variables, the operational definitions formulated were: (1) postpartum depression (tendency and non-tendency to experience postpartum depression); (2) maternal age (high risk and low risk); (3) parity (primipara and multipara); (4) maternal education level (primary, secondary and higher education); (5) type of delivery (vaginal and cesarean section); (5) family income (in accordance with the regional minimum wage and not in accordance with the regional minimum wage).

The data collection was conducted by visiting Integrated Health Centers in the working area of Abeli Public Health Center to obtain potential respondents according to the inclusion and exclusion criteria. After the researcher obtained potential respondents according to the predetermined criteria, the researcher conducted informed consent for potential respondents. Potential respondents who were willing to become respondents would be given a questionnaire and fill out the Edinburgh Post-natal Depression Scale (EPDS) questionnaire.

3. RESULT AND DISCUSSION

Table 1. Frequency distribution of age, education level, family income, type of delivery, parity and postpartum depression

No.	Variables	N	%
1	Postpartum depression		
	• Tendency to postpartum depression	15	45.5
	• Non-tendency to postpartum depression	18	54.5
2	Maternal age		
	• High risk	22	66.7
	• Low risk	11	33.3
3	Mother's education level		
	• Primary education	9	27.3
	• Secondary education	20	60.6
	• Higher education	4	12.1
4	Family income		
	• In accordance with the regional minimum wage	11	33.3
	• Not in accordance with the regional minimum wage	22	66.7
5	Type of delivery		
	• Vaginal	23	69.7
	• Cesarean section	10	30.3
6	Parity		
	• Primipara	20	60.6
	• Multipara	13	39.4

Table 2. Risk factors for the tendency to postpartum depression about age, education level, family income, type of delivery, and parity.

No.	Variables	Postpartum depression		OR value
		Tendency to postpartum depression	Non-tendency to postpartum depression	
1	Maternal age			1,00
	• High risk	10	12	
	• Low risk	5	6	
2	Mother's education level			0,2
	• Primary education	5	4	
	• Secondary education	7	13	
	• Higher education	3	1	
3	Family income			0,31
	• In accordance with the regional minimum wage	3	8	
	• Not in accordance with the regional minimum wage	12	10	
4	Type of delivery			2,5
	• Vaginal	12	11	
	• Cesarean section	3	7	
5	Parity			0,95
	• Primipara	9	11	
	• Multipara	6	7	

Risk Factors for the Tendency to Postpartum Depression

Maternal Age

Maternal age at high risk (<20 years and >35 years) is 1 times more likely to experience postpartum depression compared to maternal age at low risk. Mothers who give birth at the age of >35 years are at greater risk in terms of pregnancy, childbirth, and also the postpartum period and have many responsibilities. Differences in experience with health problems or diseases, and the high incidence of postpartum depression are also likely to be influenced by poor socioeconomic status (Putriarsih, 2017).

At the age of over 35 years, physically, at that age, it will be easy to get sick due to aging reproductive organs and the birth canal will become stiffer, causing obstructed labor or even bleeding. Mentally, at that age most mothers have experienced previous labor and do not want to get pregnant again, so there is a burden for the mother because she has had many responsibilities towards her previous child.

This research is in line with the research of Wulandari et al. (2021) that the age of pregnant women can affect the incidence of postpartum depression. A research of 60 respondents found that 25% of mothers experienced symptoms of depression during their pregnancy. The results of the research by Setiawati et al. (2019) found that 184 respondents (59.2%) experienced postpartum depression. Respondents who were at high risk at the age of >35 years were 151 respondents (77.4%), while respondents who were at low risk at the age of 20-35 years were 33 respondents (28.4%).

Parity

Primipara is 0.95 times more at risk than multipara to experience postpartum depression. This is in line with research conducted by Saraswati (2018) that the incidence of postpartum blues mostly occurs in primipara obstetric status, namely 6 respondents (20%) with a p-value of 0.011 (<0.05). Meanwhile, multipara is 3 respondents (10%), which means there is a relationship between obstetric status and the incidence of postpartum blues. Other researchers also stated that postpartum mothers with primipara status who experience baby blues syndrome have a higher frequency (70%) compared to postpartum mothers with primipara status who do not experience baby blues syndrome (55%) (Paramasatya, 2018). In mothers who have never given birth or new mothers, they will have more difficulty in carrying out their role as mothers because they do not have experience as mothers. In most mothers, they will feel unable to carry out their role properly because they are still confused or afraid that something will happen to their baby.

Family Income

Respondents with family income that does not meet the regional minimum wage have a 0.3 times greater risk of experiencing postpartum depression compared to those with family income that meets the minimum wage. This is in line with the results of Yanti's (2014) research, which stated that respondents with low income have a 4.76 times greater risk of experiencing postpartum blues compared to respondents with good family economic status.

Socioeconomic status is one of the variables that affect the occurrence of postpartum blues because socioeconomic status is not only on income but also on a person's education, work, and lifestyle (WHO, 2008). Based on research conducted by Patel (2002) in WHO (2008) stated that unemployment and low socioeconomic status are significantly related to postpartum depression. Family income in this research is one of the factors related to the occurrence of postpartum blues in primiparous postpartum mothers. Socioeconomic conditions often disrupt the mother's psychology. In families who are able to cope with the costs of maternal care during childbirth, as well as the addition of a new baby, they do not feel the financial burden so that it does not interfere with the transition process to parenthood. However, families who receive the birth of a baby with a financial burden can experience increased stress, this stress can interfere with parental behavior so the transition period to enter the role of parenthood will be more difficult (Bobak et al., 2017).

Education Level

Secondary education is 0.2 times more at risk of experiencing postpartum depression compared to higher education. Manurung (2018) stated that low maternal education can affect the occurrence of postpartum events. Mothers with low education tend to have many children and their baby care techniques will be less good.

According to the research results conducted by Raisa 2011 in Masitho et al. (2019), the higher a person's education, the greater the influence on the mother's mindset and knowledge, so mothers with a good level of education will have a high self-confidence in taking care of their children which affects their anxiety (Sapulette et al., 2022)

A person's education will affect their way of thinking and their perspective on themselves and their surroundings. Therefore, the attitude of someone with a higher education will be different compared to someone with a lower education in responding to the childbirth process so low education can cause postpartum depression due to a lack of knowledge about mothers, and mothers with higher education will easily obtain information or guidance given to overcome their

problems, for example through psychoeducation (Ernawati et al., 2020).

The role of education level in the incidence of postpartum depression is related to the mother's ability to deal with emotional changes and social pressure. Education level affects a person's level of knowledge, which then affects their mindset and health behavior. People with higher education are more receptive to information, including adapting to emotional changes (Fairus & Widiyanti, 2014).

Type of Delivery

Vaginal delivery is 2.5 times more at risk of experiencing postpartum depression compared to delivery by Cesarean Section. Psychological changes that occur in postpartum mothers occur due to several things, namely experiences during childbirth, the responsibility of the role as a mother, the presence of new family members (babies), and new roles as a mother (Maryunani, 2009). The type of delivery affects the risk of postpartum depression, this is due to the mother's experience during childbirth, and physical trauma experienced during childbirth will affect the mother's psychology.

Research conducted by Goker et al. (2012) in Turkey, which analyzed whether the type of delivery was a risk factor for postpartum depression, found that the type of delivery affects the occurrence of postpartum depression, and mothers who have vaginal deliveries have a 27.6% risk of suffering from postpartum depression. According to research conducted by Patel et al., (2005) in England, which analyzed the effect of operative delivery on postpartum depression in postpartum mothers and conducted in a prospective cohort, showed that delivery affects the occurrence of postpartum depression in postpartum mothers, where it was stated that mothers who have vaginal deliveries have a 9.3% risk of postpartum depression.

4. CONCLUSION

Maternal age, education, type of delivery, family income, and parity are risk factors for postpartum depression in postpartum mothers. Vaginal delivery has the greatest risk of experiencing postpartum depression. Therefore, support from husband and family, as well as preventive measures such as maturing gestational age (20-35 years), increasing knowledge related to pregnancy and postpartum maternal and infant care, and financial preparation play an important role in preventing postpartum depression in postpartum mothers.

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