Contribution of Premature Baby (the Low Birth Weigh) towards Postpartum Depressed Mother

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ARTICLE INFO

ABSTRACT

Postpartum depression is a common phenomenon and has the complexities which bringing on adverse consequence for mother, baby, and family. The reference of this research provides an overview of the various risk factors for postpartum depression. This research is aimed to identify various risk factors such as level of depression, postpartum type, husband's support, baby weight, parity and number of children. Those factors can be the cause of postpartum. Women with postpartum depression who have the baby in low weight can be identified as the strongly predictor factor of postpartum depression cause. The method applied in this research is an observational research with cross sectional design which involving 75 postpartum mothers who having live babies. Data analysis is conducted by chi-square that presents the correlation of baby in low weight and the incidence of depression indicated on p value less than 0,05. Data are collected at once time. Result shows that there is a correlation of childbirth type, social support, baby weight, and parity toward the incidence of postpartum depression. This research provides a crucial reference about mother with postpartum depression that can be caused by the birth of low baby weigh. For further researchers, it can be an insight for analysis as the effort of baby and mother care in case to prevent the postpartum depression.

INTRODUCTION

Postpartum depression can be defined as childbirth depression is classified as psychological disease. The cases faced by people about postpartum with depression incidence have been diagnosed and no drug for that. Postpartum depression is defined operationally as a psychological disease which a postpartum woman is depressed and lasts for 4 weeks (Kusuma, 2019). Postpartum depression has the symptoms referring to heart feeling change such as sadness and underpressured feeling, postpartum mothers experience loss of interest in carrying out daily activities, hard to sleep (insomnia), decrease or increase of weight significantly, feeling of being useless or excessive guilt, experiencing limited movement (psychomotorics) or agitation, loss of energy or fatigue, getting a decrease of thinking power, difficult concentration, thinking about death over (Astri *et al*., 2020). Several previous studies present that postpartum depression can make a woman getting decrease of thinking power as the consequence of the feeling burdened against a new role. This condition will bring the risk of children care on the growing process in their physic, emotion, cognitive, and social interaction. The further condition in the case of postpartum depression can influence the interactional ability for a woman in practicing children care such as inability in creating good environment and supporting children in their growth period (Edwards *et al*., 2006).

Prevalence of postpartum depression in other countries such United States of America from 2004 to 2005 is about 11,7% until 20,4%. The condition of postpartum depression shows that when a woman does not get the appropriate treatment in consequence it will bring the serious effect towards the life of postpartum mother and even it can be a postpartum psychosis. Its case is informed by Center for disease control and prevention (CDC). In Indonesia, the number of postpartum depression incidence is lower than other countries in early prediction.

The research that conducted in several areas such as Jogjakarta, Surabaya, DKI Jakarta shows that the number of postpartum depression incidence is about 11% until 30%. Those research present that the data cannot be known surely because there is no organization as the research center to collect the data of postpartum depression (Nasri et al., 2017). The research conducted by Maryatun (2020) in Surakarta showed that number of postpartum depression incidence was about 10,7%. The variable used in the analysis

indicated to the correlation of significance *p value* less than 0,05% on variable of baby care status (Suryati, 2008).

Mothers who have experienced postpartum depression facing the condition to do not find helps for health workers although both of them are often interacted each other (Edwards et al., 2006). Its finding was supported by the research conducted by Rusli et al. (2011) that mentioned that 50% of women who experienced postpartum depression did not understand how and where to find the information as faced by them. A woman in postpartum depression knows that there is something wrong of herself, otherwise most of mothers at the first time in childbirth and a mother who borns when the last children in 5 years old absolutely face the excessive postpartum anxiety. In Indonesia, most of postpartum women will get the psychological change such as uncomfortable childbirth process. Sometimes, mother and her family are less realizing the disease such as the existence of postpartum depression for mothers. The research conducted by Rus Prelog *et al.*, (2019) described that the condition or psychological change was not felt by mother or her family around them. Those changes often becoming a reason indicate physiological adaptation process as the change against new role becoming a mother. Its point of postpartum will have effect of stitches and some limitation in doing activities because of postpartum process such as blooding or iterine involution which will give the pain for mother as the physiological adaptation process of organ function restoration. In Indonesia, most of health workers have no ability in quick detecting or screening on the cases of postpartum depression. It is caused that they are not sure in how to give the appropriate solution for postpartum mothers who get the discomfort disorder. Most of them consider that its act is impolite if they must observe the psychological change experienced by postpartum mothers. They are focused on health recovery and the restoration of physiological function for mother and baby. Only few of health workers who can provide appropriate education about the disorders which probably happened in postpartum as symptoms leading to depression (Akter, 2019).

METHOD AND MATERIAL

The research applies an observational research with cross sectional design. It is conducted during three months in 2019. Simple random sampling is used to take

the sample about 75 respondents with the inclusion criterion that the patients born in hospital, the postpartum mothers in 14th until 21th of daybirth, mothers who have the babies that have been or are being cared in high risk baby room, babies who are still alive until this research is done. The data collection is conducted by numerator who experienced over 5 years in clinic or hospital and minimum education in the health diploma. Variable in this research is divided into two type namely independent variable (postpartum type, social support, baby weight, parity and number of children) while dependent variable (the incidence of postpartum depression). Score instrument of postpartum depression is obtained by Edinburg Postpartum Depression Scale (EPDS) questionnaire. The analysis is conducted descriptively to figure the respondent characteristics. The selection of bivariate test for Chi Square is based on the score of *expected count* < 5 with the test of *fisher's exact*. The ethical eligibility requirements is from Biomedical of medical school at UNS Surakarta number: 409/III/H. REC/2019. Informed consent is treated to respondents who involved in this research.

Distribution analysis of postpartum depression applies the scale which has the capability in measuring or detecting the risk of mild depression about 52%. While, the scale of EPDS on moderate risk can measure and detect or on high risk depression, then it can detect about 20%. The advantage of EPDS questionnaire with 10 statements will provide the easiness for mothers or respondents in selecting items which expected to be matched with the psychological condition felt at that time. The analysis is conducted by using screening test on the scale of measuring postpartum depression then it is expected to be able to provide the overview of psychological development for postpartum women.

Questionnaire used to provide the view of variable namely postpartum type, social support, baby weight, parity and the number of children is applied through giving questionnaire that has adopted to operational definition of this research. The variable of postpartum type is normal postpartum and SC (*Seksio Saesarea*); husband's support is divided into fully social support and lack of social support; baby quality assesses baby weight with the classification < 2500 grams dan ≥ 2500 grams. The operational definition of parity is divided into primipara and multipara, while the number of children is classified into having one child and more than one child.

RESULTS AND DISCUSSION

Univariate Analysis

Table 1. Characteristics Variable and the Incidence of Postpartum Depression for Mother in Government Hospital of Surakarta

No	Variable	N	Percentage %
1	Depression Status		
	Depression	8	10.7
	Not Depression	67	89.3
2	Postpartum Type		
	SC	29	38.7
	Normal	46	61.3
3	Social Support		
	No	35	46.7
	Yes	40	53.3
4	Baby Weight		
	< 2500 grams	31	41.3
	≥ 2500 grams	44	56.7

No	Variable	N	Percentage %
5	Parity		
	Primipara	36	48
	Multipara	39	52
6	Number of Children		
	≤1 child	39	52
	>2 Children	36	48

Table 1 shows the description about all variables in this research. Most of subjects is on not depression, most of mothers is in pregnancy and categorized into normal postpartum. Most of baby weight are higher than 2500 grams (56,7%). Most of parity status are in multipara (52%) with the number of children about 1 child (52%). The result shows that 53,3% of social environment supporting their baby birth.

Bivariate Analysis

1. Correlation of Postpartum Type with Depression

Table 2. Correlation of Postpartum Type with Depression Status

Postpartum Type	Depression Status		Total	OR CI 95%	ρ Value
	Non Depression	Depression			
SC	11 (52.4%)	10 (47.6%)	21 (100%)	6.33 (2.03 – 19.76)	0.001
Normal	8 (14.8%)	46 (85.2%)	54 (100%)		
Total	19 (25.3%)	56 (74.7%)	75 (100%)		

Table 2 shows that there is a correlation of postpartum type against depression status with score *ρ Value* =0.001, most of respondents get the normal postpartum and experience in depression are about 46 respondents (85.2%) with the score OR=6.33 which indicating that mothers who get normal postpartum so they will get the hard depression with the opportunity about 6.33 times compared to mothers experienced SC.

2. Correlation Analysis of Social Support with Depression Status

Table 3. Correlation of Social Support with Depression Status

Social Support	Depression Status		Total	OR CI 95%	ρ Value
	Non Depression	Depression			
No	1 (16.7%)	5 (83.3%)	6 (100%)	0.57 (0.06 – 5.18)	0.024
Yes	18 (7.3%)	51 (92.7%)	69 (100%)		
Total	19 (25.3%)	56 (74.7%)	75 (100%)		

Table 3 presents that there is a correlation of social support against depression status with score ρ *Value* <0.05, most of respondents get social support and they who get depression are about 51 respondents (92.7%).

This research shows that there is no correlation of social support towards depression status. Postpartum mothers will really need support from the surrounding environment as an effort to develop body functions and the newborn management.

3. Correlation of Baby Weight with Depression Status

Table 4. Correlation of Baby Weight with Depression Status The analysis result of variable correlation of baby weight and depression status

Baby Weight	Depression Status		Total	OR CI 95%	ρ Value
	Non Depression	Depression			
< 2500 gr	16 (51.6%)	15 (48.4%)	31 (100%)	14.58 (3.71 – 57.23)	<0.001
≥2500 gr	3 (6.8%)	41 (93.2%)	44 (100%)		
Total	19 (25.3%)	56 (74.7%)	75 (100%)		

Table 4 describes that there is a correlation of baby weight against depression status with score ρ Value = <0.001, on the mothers who have the baby with weight are less than 2500 grams, most of them get depression are 15 respondents (48.4%) with score OR = 14.58, it means that mothers with baby in less than 2500 grams have 14 times greater risk to get postpartum depression than mothers who get birth the baby in weight more 2500 grams.

Mothers with postpartum depression will experience problems in managing their own care (postpartum period) and baby care. They usually have mood disorders that can affect parenting patterns to the baby growth. Mother is not able to breastfeed her baby properly, the compulsion in caring for the newborn, the lack of pleasure when being able to hug her baby, for instance.

4. Correlation of Parity with Depression Status

Table 5. Correlation of Parity with Depression Status

Parity	Depression Status		Total	OR CI 95%	ρ Value
	Non Depression	Depression			
Primipara	9 (22%)	32 (78%)	41 (100%)	0.68	0.036
Multipara	10 (29.4%)	24 (70.6%)	34 (100%)	(0.24– 1.91)	
Total	19 (25.3%)	56 (74.7%)	75 (100%)		

Table 5 shows that there is no correlation of parity against depression status with the score ρ *Value* 0.036, most of respondents are primipara mothers and they who get depression are 32 respondents (78%). Primipara Status has 0,6 greater risk than postpartum depression.

5. Correlation of the number of Children with Depression Status

Table 6. Correlation of the Number of Children with Depression Status

The number of Children	Depression Status		Total	OR CI 95%	ρ Value
	Non Depression	Depression			
≤ 1 child	9 (20%)	36(80%)	45 (100%)	0.50	0.193
>2 children	10 (33.3%)	20(66.7%)	30 (100%)	(0.17– 1.43)	
Total	19 (25.3%)	56(74.7%)	75 (100%)		

Table 6 shows the view that there is no correlation among the number of children and depression incidence. Bivariate analysis ρ *Value* 0.193 on the table describes that most of respondents are mother with ≤ 1 child and they who get hard depression are 36 respondents (80%) .

For mothers with postpartum depression, it can appear the seriously mental disorder which can influence the condition of a woman from various culture. Its disorder can be rarely detected at early and due to delay in seeking helps of health care and ignorance for mothers in order to do not reveal the emotional problem faced by them (Astri *et al.*, 2020). The number of postpartum experience in troubles and often have an understanding that its condition refers to normal thing that happens for each woman who has baby. Several women just realize and understand that those condition is an emotional disorder (Wahyuni *et al*., 2018).

Postpartum Type

Health history for postpartum mother consists of two method namely spontaneous childbirth that conducted without the indications of risk for mothers, but sometimes, this method needs maneuvers such as an episiotomy. The childbirth method with SC is conducted based on the higher risk if it is processed normally. The injury on the birth canal either episiotomy or abdomen gives a predisposition to postpartum depression since there is painful wound on those area. For the postpartum care or baby treatment, it needs an ability to execute the activities which can process well. Otherwise, because of there is several wound in birth canal, it makes postpartum depression. The limitation of postpartum mothers can make them feeling useless for their new role and getting confusion in case of baby care. For instance, when mothers in early period of childbirth must do baby care such as the breastfeeding cannot be done optimally because of the injuries on the birth canal. Compared to normal childbirth process with SC method, it needs more time in recovery. The SC process will cause a complicated case that the stitches on the abdomen needs more time for its recovery. It can be assumed that mother with SC method has greater risk in postpartum depression condition than mother who experiences in normal childbirth process (Sari, 2020).

For postpartum mothers who have the inappropriate expectation of baby quality, it can make them feeling worried to their baby condition. Its feeling will appear the stress

for mothers then it can pressure erdopine hormone or hormone that should be released to optimize mother's milk, increasing baby care such as breastfeeding on appropriately way for baby. Besides, babies in less quality such as low weight have the high risk to their health because the low weight baby will adapt with their environment badly. Most of them do not have capability to suck hardly so it can be risked to the lack of nutrition and early adaptation in their life. Baby in low weight needs more extra cares from mother to give the protection and needs so baby can adapt and survive at early life period (Kartikawati, 2019). The incidence of postpartum depression in this research shows that there is a significant correlation of baby quality with postpartum depression. Baby weight is classified into low baby weight < 2500 grams and normal baby weight ≥ 2500 grams. This weight is an important indicator to measure the baby ability in processing the early life because of normal baby in new born having weight ≥ 2.500 grams physiologically has the ability of quite mature organs such as heart, lungs, and other physiological systems. This condition can help babies to process an early life (Maryatun, 2020).

The lack of social support from family can be the main cause of emotional disorder at postpartum period. Postpartum mother should be given more good motivation psychologically in order to execute the dynamically process and adaptation positively so mothers can play new role well and give the opportunities in baby care or even think it as their duty for baby that they have born (Smorti *et al.*, 2019). The health workers need to give the socialization or education for mother and family about the change that will be faced by the postpartum mothers and giving opportunities for them to gather information of new born baby care and its disorder (Mahmudah *et al.*, 2013). Social support is helpful in case of health recovery for mother and new born baby care. Its support will be effected significantly to the incidence of postpartum depression because of many regulation which required to family as the goal in giving previous experiences to be applied by each of their family member. This condition figures that postpartum mothers are not allowed to consume the high protein meals in order to make the stitches will heal soon. The regulations for postpartum mother should be scientifically contradictory to restore the health of mothers and their babies (Fatmawati, A., Gartika, 2019). Sometimes, those regulation that adopted by family cannot be accepted well by mothers

because it considered as irrational thing and very complicated in processing the baby and mother care. The lack of opportunity given to family as social support makes mothers less in self-confidence in case of building health to them and baby.

Primipara postpartum in this research has the risk to the incidence of postpartum depression. This statement is related to primipara mother or the mothers in first time new born that have not experienced well in health care management for both of them and baby (Wardani, 2009). The role changing that experienced by primipara mother will be able to effect the role change which felt can make emotional disorder. This change absolutely needs professional treatment by health workers to facilitate the adaptation of new role process for mothers. Each health workers should be able to give a conducive guidance and to anticipate the occurance of postpartum depression. They also should give the solution or technical guidance about how treat it or advicing mothers who face mood disorder or excessive anxiety. In this research, it mentions that the potency and responsibility of health workers are to give the health counseling for postpartum mothers in case of decreasing the emotional disorder effected by the role change as postpartum mother (Nichols et al., 2007).

The research conducted by Masruroh (2015) described that most primipara mothers in parity did not experience postpartum depression. While, most multipara mothers in parity had experienced the postpartum depression. This result shows that mother in primipara parity has the higher risk in getting postpartum depression.

The lack of social support in family can be main factor of emotional disorder in postpartum period. Postpartum mothers should be given good motivation psychologically so they can pass the changing period or adaptation process which conducted by mother positively in order to play good role for new duty, giving the enough opportunity to do baby care so they can feel their truly work for baby that they have born (Rusli et al., 2011). The importance of health workers in giving education for mother and family needs to be realized that they will describe the existence of change faced by the postpartum mothers and give opportunity for mothers to gather information about themselves and their baby (Mahmudah et al., 2013).

For postpartum mother, the level of stress is influenced by both of internal and external factors. Internal factor figures the hormone change condition, individual and psychological factors, or even the experience

in having the history of previous depression, health history during pregnancy and childbirth process with complication, childbirth with SC, the difficulty on baby breastfeeding, and the limitation of knowledge by mothers in baby care (Ningrum, 2017). The external factor can influence stress condition for postpartum mothers such as the baby condition and quality, the number of children in family, the existence of social support and husband's support, social mental status when giving postpartum care (Marasco et al., 2012).

It is accordance with the reseach conducted by Sylven which shows that the factors that influence stress for postpartum mothers such as social support, maternal change, the role change when postpartum, physiological change, lack of adaptation ability by mothers, negative feeling and inability in problem solving or low confidence towards the postpartum condition because of helplessness (Sylvén et al., 2017). Then, the research by Iwata et al. (2016) mention that the condition that influenced to stress condition fo postpartum mothers such including the weakness of postpartum mother so they have dependence on others, the low self-esteem due to postpartum fatigue, lack of family support and having a new role that requires physical and psychological abilities.

Based on the description of previous studies above, it can be assumed that the maturity and readiness of postpartum mothers, postpartum type, baby quality (baby weight) are main factors in eliciting anxiety and stress leading to postpartum depression. Mothers who have good readiness and maturity will be successes in solving adaptation process in stress during postpartum period. It is contrastly with mothers who have lack of childbirth knowledge and care process that they cannot be adapted in dealing stress.

CONCLUSION AND SUGGESTION

Postpartum mothers need the crucial information about knowledge and skill to develop and supply them for their baby treatment and health maintainance. Its skill and knowledge, even family support are able to increase the recovery acceleration of postpartum mother condition and being a prevention effort toward depression. The postpartum mother and new baby born cares need big motivation from herself or the environment which bringing the self confidence for her in health care as the effort to reduce anxiety levels. New born baby actually needs an intensive treatment as adaptation process in early baby life. Mother's ability in managing health care for baby will make a

strong contribution to reduce the depression levels. Mother's self-confidence will be formed when she is able to take good care of the baby. The further research is expected to conduct the effort in decreasing the level of postpartum depression through experimental research with applying method which can reduce the cases of postpartum mothers.

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