

Original Research Article

The Influence of Individual Characteristics, Internal and External Factors of Postpartum Mothers with Baby Blues Syndrome in Rural and Urban Areas in Kupang City

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Abstract: Baby Blues Syndrome (BBS) is a psychological disorder in postpartum mothers. This can interfere with milk production. The mother cannot provide adequate breast milk to the baby and cannot take care of the baby properly. This study was conducted in two health center in rural and two in urban. This was a comparative descriptive design using with cross sectional approach. The number of respondents was 119 postpartum mothers taken by purposive sampling technique. Data were collected through questionnaires and interviews. The percentage incidence of BBS was 75.6%. From the results of Chi-Square test, the factors that significantly influence the incidence of BBS include education ($p=0,023$), type delivery ($p=0,025$), family economic status ($p=0,005$), and social support ($p=0,039$). From the different Mann Whitney Test, it was found that there were differences in factors between rural and urban areas, including education (Sig. 2 Tailed=0,029), occupation (Sig. 2 Tailed=0,001), nutritional status (Sig. 2 Tailed=0,001), parity (Sig. 2 Tailed=0,010), type delivery (Sig. 2 Tailed=0,000), and family economic status (Sig. 2 Tailed=0,000). Mothers with low family economic status and education in rural areas need capacity building through training (cooking and sewing) and education (counseling). Class activities for pregnant women by involving partners or families to increase social support, as well as counseling about the consequences of pregnancy out of wedlock and mental health for pregnant women to promote better physical, mental and social health.

Keywords: Baby blues syndrome, postpartum mothers, rural, urban.

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INTRODUCTION

The post partum period (puerperium) is a period that lasts approximately 6 weeks after a woman gives birth to a baby until when the body returns to its pre-pregnancy state. This period is associated with intense physical and emotional changes leading to anxiety and mood disorders. There are three degrees of postpartum mood disorder, namely, postpartum blues, postpartum depression (PPD), and postpartum psychosis. Postpartum blues, also known as Baby Blues Syndrome is a mood disorder that is relatively common in postpartum mothers, which is the most common depression in postpartum mothers. This condition often occurs within 14 days postpartum and tends to get worse on days 3 and 4. Mothers with BBS must be identified early and treated adequately. because if left

untreated it will put the mother at risk of recurring disease and have a long-term impact on the role of the mother which is related to the emotional and behavioral development of the child, as well as the role of the mother in the family. Improper handling of BBS can develop into postpartum depression or even more severe symptoms, namely psychosis. The impact that will be experienced by the mother is that it can interfere with the mother's role, one of which affects the relationship between mother and baby, and mothers tend to be reluctant to give breast milk. That way the baby will be malnourished and the relationship between mother and baby is less established Therefore [1].

Reactions caused by BBS are characterized by anxiety, depression or sadness, tend to blame oneself, feeling unstable, irritable, crying, appetite disturbances,

and sleep disturbances [2]. The prevalence of Postpartum Blues according to WHO (2018) in the world population is 3-8% with 50% of cases at productive age, namely 20-50 years [3]. The incidence of BBS in Asia varies and is quite high between 26-85%. It is estimated that 20% of women giving birth experience BBS globally. About 50-70% of postpartum mothers show early symptoms of the appearance of the baby blues on the third to sixth day after giving birth. In Indonesia the incidence of baby blues is between 50-70% [4]. The 2018 Riskesdas data regarding emotional mental health problems (depression and anxiety) was 9.8% [5].

Mothers with BBS can affect the baby, because the baby is still very dependent on the mother. If postpartum mothers who experience BBS can interfere with milk production because milk production is strongly influenced by psychological factors. Postpartum stress conditions are experienced by 80% of women after giving birth. Feelings of sadness that hit the mother arise within two days to two weeks after delivery. The condition of mothers who are easily anxious and stressed can interfere with lactation so that it can affect milk production. This is due to stress which can inhibit milk production. The higher the level of emotional disturbance, the less stimulation of the hormone prolactin is given to produce breast milk. The mother cannot provide adequate breast milk to the baby because of the mother's psychological problems. In addition to the problem of breastfeeding, mothers also cannot care for babies properly.

The cause of BBS is not known with certainty, but is thought to be influenced by internal and external factors. Internal factors such as hormonal fluctuations, psychological and personality factors, previous history of depression, history of pregnancy and childbirth with complications, caesarean section deliveries, unplanned pregnancies, low birth weight babies (LBW), and mothers who breastfeed and experience difficulties in breastfeeding and mothers who do not have experience caring for babies [1]. Several factors can influence the occurrence of BBS, namely maternal age and parity. The factors that affect BBS are usually due to several reasons so that the signs and symptoms of BBS are a multifactorial mechanism. In primiparous mothers who have no experience in caring for children, they often have difficulty adjusting to the isolation they experience and will easily experience BBS because after giving birth the primiparous mother will be in an adaptation period. In psychological adaptation, a woman will experience adjustments to her role as a parent. Most primiparous mothers will feel anxious and restless after giving birth because this is their first delivery. By supporting the mother in this period, she must provide support and attention from both her partner and family and provide an opportunity to get enough rest. In addition, positive support for the success of becoming parents of newborns can help restore confidence in the

mother's abilities. A strong and consistent support system is the main factor for success for postpartum mothers to be able to pass BBS. This support system can be carried out by the closest people such as husbands, parents and can also be carried out by health workers [7].

In Edward's research (2017) said that the incidence of baby blues in Indonesia by screening using the Edinburgh Postpartum Depression Scale (EPDS) was found to be 14-17%. According to Pangesti (2010) from the results of research conducted in Indonesia, namely in Jakarta conducted by dr. Irawati Sp.Kj, 25% of the 580 mothers who became respondents had this syndrome. And from several studies that have been conducted in Jakarta, Yogyakarta, and Surabaya, it was found that the incidence of baby blues syndrome is 11-30%. According to Oryzae (2011) from the results of a study of 130 postpartum mothers from April to May 2010 at the North Jakarta City General Hospital, 30% of mothers experienced mild psychological disorders or baby blues syndrome.

In addition to internal and external factors, differences in residence also affect a person's stress level. People in urban areas are more susceptible to stress and anxiety. This is caused by limited space, economic pressure, traffic jams, and air pollution. Meanwhile, rural communities are caused by economic pressures and limited information and access to treatment. In addition, in the COVID-19 pandemic situation, the impact of which was felt for people with low economic status, the stress level of mothers also increased. Research conducted by Simone N. Vigod, *et al.*, in Canada in 2013 concerning the relationship between residence and depression in childbirth found that the postpartum depression rate of women living in urban areas with a large population is at risk of experiencing postpartum depression compared to women living in rural, and semirural or semi-urban areas. This is caused by immigration status, violence experienced by the mother, selfishness, and social support.

Mothers who experience BBS will experience difficulties in adjusting because they experience an imbalance in mothers who have gone through childbirth, so that in order to balance and adjust, coping behaviors are needed that can help postpartum mothers in a balanced condition, so they do not experience disturbances in their developmental stage, namely postpartum depression. and psychosis. Postpartum mothers need coping stress that can help mothers deal with their condition so that it does not lead to more severe psychological disorders. The mother's way of dealing with stress depends on family support, as the biggest source of coping. Mothers with BBS need support from their parents, husbands and other families [8].

Based on the description above, the researcher is interested in conducting research related to The Influence of Individual Characteristics, Internal and External Factors of Postpartum Mothers With Baby Blues Syndrome in Rural and Urban Areas In Kupang City.

RESEARCH METHODS

This research is a quantitative study using a comparative descriptive research design with a cross sectional approach. This research was conducted in 4 (four) Puskesmas areas where two Puskesmas were in rural areas, namely the Batakte Health Center and Baun Health Center, and two Puskesmas in urban areas, namely the Oepoi Health Center and Kupang City Health Center with the consideration that the two Community Health Centers in the Regency area represented a difficult economy and two Community Health Centers in the Kupang City area representing an elite economy. The research was conducted in June-July 2021.

The population in this study were all postpartum mothers in the work area of the Batakte Health Center, Baun Health Center, Oepoi Health Center and Kupang City Health Center who gave birth in June 2021 with a total of 170 people, taken from the average mother who gave birth in June in the last 2 years, namely at the Batakte 35 Health Center. people, Baun Health Center 18 people, Oepoi Health Center 100 people, and Kupang City Health Center 17 people.

Inclusion Criteria

- 1) Childbirth day 3-14.
- 2) Deliver live babies.
- 3) Willing to be a respondent by signing an informed consent.

Exclusion Criteria

Mothers who can't hear or speak.

The sampling technique in this study was purposive sampling. To determine the sample size using the Slovin formula in order to obtain 119 respondents. To determine the respondents from the four Community Health Centers, they were calculated using Proportional Random Sampling and obtained the following results:

Batakte	: 24 respondents
Bauun	: 13 respondents
Oepoi	: 70 respondents
Kupang City	: 12 respondents

Variable free in this study consists of age, education, occupation, parity, unplanned pregnancy, nutritional status, type of delivery, family economic status, pregnancy spacing, marital status, culture, social support and coping with stress. Whereas the dependent variable in this study is BBS. The instrument used is a questionnaire. To measure the level of social support using the Postpartum Depression Predictors Inventory (PDPI) questionnaire. This questionnaire consists of 12 questions using an ordinal scale where there are four possible answers, namely Strongly Agree, Agree, Disagree, and Strongly Disagree. To see Coping stress using The Ways of Coping Questionnaire (WCQ) it is measured through a 10 item scale in the form of a Likert model with statements with alternative answers Strongly Agree, Agree, Disagree, Strongly Disagree. Whereas BBS is measured using the Edinburgh Postpartum Depression Scale (EPDS) which consists of 10 question items, where these questions allow clients to fill them in and do not make clients feel tired when answering the questionnaire because they are easy to understand. Several demographic characteristics were also collected, including age, education, occupation, parity, unplanned pregnancies, nutritional status, type of delivery, family economic status, pregnancy spacing, marital status, culture. The results of the validity and reliability tests on the social support, coping stress and BBS questionnaires show that all of the items are valid and reliable. The results show that the Scale Corrected Item-Total Correlation and Cronbach's Alpha if Item Deleted values are greater than the R-table values.

The tests used are the Chi-Square Test and the Mann Whitney Test. The Chi-Square Test was used to determine the effect of age, education, occupation, parity, pregnancy spacing, marital status, nutritional status, type of delivery, unplanned pregnancies, coping stress, family economic status, culture, social support and the location of postpartum mothers on incidents BBS, and Mann Whitney Test to determine the differences in the factors that influence the incidence of BBS between rural and urban areas. This research was carried out based on an ethical permit issued by the Health Research Ethics Commission at the Faculty of Medicine, Universitas Nusa Cendana with number 51/UN15.16/KEPK/2021.

RESULTS AND DISCUSSION

A. Univariate Test

Table 1: The distribution of respondents based on individual characteristics

Individual Characteristics	n(%)
Age	
<20 years	21 (17,6)
20-35 years	87 (73.1)
>35 years	11(9,2)
Education	
No school	1(0.8)

Individual Characteristics	n(%)
Elementary School	12 (10,1)
Junior High School	11 (9,2)
Senior High School	64 (53.8)
Diploma/Bachelor Degree	31 (26.1)
Profession	
Mother works	35 (29.4)
Mom doesn't work	84 (70.6)
Parity	
Primipara	50 (42.0)
Multipara	64 (53.8)
Grandemultipara	5 (4,2)
Pregnancy Distance	
< 2 years	51 (42.9)
≥ 2 years	68 (57.1)
Marital status	
Marry	80 (67.2)
Not married yet	39 (32.8)

From the results of the study it was found that there were respondents who gave birth at risky ages, namely <20 years and > 35 years. Pregnant women who are too young (<20 years) and too old (>35 years) have a greater risk of giving birth to unhealthy babies. This is because at the age of <20 years, from a biological point of view, a woman's reproductive function has not yet fully developed to accept an immature fetus and psyche to deal with the demands of moral, mental and emotional burdens. Meanwhile, at the age of > 35 years, the reproductive function of women has experienced a setback or degeneration so that the possibility of postpartum complications is greater [9]. Apart from age, the education level of pregnant women also plays a role in the quality of care for their babies. Information related to pregnancy care is urgently needed so that it will increase mother's knowledge. The higher a person's education, the better his knowledge of something. Work related to the activity or bustle of the mother. What needs to be considered by working and non-working mothers is to avoid activities that increase stress. Age, education and employment status affect one's mindset,

self-determination and the way a person deals with a problem [9].

According to Manuaba's theory, high parity allows for complications of pregnancy and childbirth, one of which can cause disruption of O2 transport from mother to fetus which can cause asphyxia. This affects the mother's anxiety about the baby being born because of difficulty breathing. Apart from parity, Spacing of pregnancies is a consideration for determining the first pregnancy with subsequent pregnancies. WHO states that the most ideal time for pregnancy spacing is 2-3 years so that mothers can provide exclusive breastfeeding to children who were born earlier, and ensure adequate nutrition by breastfeeding. In addition, mothers can also prepare themselves for the next pregnancy with good nutritional status. Pregnancy out of wedlock affects the emotional status of the mother because one of the social impacts is being in the spotlight and being the responsibility of the family because they do not have a legal marital status.

Table 2: Distribution of Respondents based on Mother's Internal Factors

Mother's Internal Factors	n(%)
Nutritional status	
BMI 18.5-22.9	45 (37.8)
BMI <18.5 and > 23	74 (62.2)
Type of Childbirth	
Normal	91 (76.5)
Fault	28 (23.5)
Unplanned Pregnancy	
Yes	36 (30.3)
No	83 (69.7)
Coping Stress	
Capable	74 (62.2)
Not capable	45 (37.8)

From the results of the study, it was found that mothers who experienced malnutrition (BMI <18.5

and > 23) were mostly in urban areas with better economic status than those in rural areas. This is

because most women in cities consume ready-to-eat food, in contrast to people in rural areas where most work as farmers and fishermen and they eat from their own gardens. Insufficient nutritional intake in pregnant women can cause Chronic Energy Deficiency (KEK). In postpartum mothers it can cause the quality of breast milk to decrease, the healing period during the puerperium is disrupted and the mother can experience infections so that mothers are prone to depression [10]. Pregnant women with high risk make the mother anxious and can make the mother's blood pressure high. Mothers with cesarean deliveries feel more anxious. Mothers often experience psychosocial and physical worries. Mothers complain of feelings of fear, loss of concentration, irritability and anxiety [11].

Unplanned pregnancies can be caused by the mother's lack of knowledge about contraception, many children, relatively young age, and the couple's relationship is not yet established or there are economic

constraints. This has a negative impact on health, social and psychological. Unwanted pregnancies are associated with higher levels of depression, anxiety and stress [12].

Mothers who are unable to cope with stress as a result are unable to take care of babies who are still very dependent on mothers. Mothers cannot care for their babies properly, because the quality of breast milk is reduced, where they cannot provide breast milk on demand so that it can cause babies to experience malnutrition, especially in babies born with low birth weight. Apart from that, mothers who give birth by cesarean have difficulty treating wounds which can result in infection [13]. Mothers who are unable to cope with stress have an impact on mothers and babies. Coping is a behavior that is developed both positively and negatively as an individual's effort to manage the mismatch between demands and internal sources that are considered a threat to their emotional well-being.

Table 3: Distribution of Respondents based on Mother's External Factors

Mother's External Factors	n(%)
Family Economic Status	
≥ UMR	
Rural	12 (17,1)
Urban	58 (82,9)
<UMR	
Rural	25 (51)
Urban	24 (49)
Culture	
Hard work while pregnant	
Exist	69 (57,9)
There isn't any	50 (42,1)
Sitting position during childbirth	
Exist	4 (3,3)
There isn't any	115 (96,7)
Leaving the house after 40 days	
Exist	102 (85,7)
There isn't any	17 (14,3)
Se,i / Bake	
Exist	19 (15,9)
There isn't any	100 (84,1)
Social Support	
Partner	
Exist	112 (94,1)
There isn't any	7 (5,9)
Family	
Exist	110 (92,4)
There isn't any	9 (7,6)
Friend	
Exist	81 (68,1)
There isn't any	38 (31,9)

Socio-economic factors are one of the triggers for the occurrence of BBS because they are directly related to meeting the needs of mothers and babies. In accordance with Curry's opinion, BBS often occurs in mothers who do not have an income or earn less than

one million. This is because it is directly related to the care of the mother and baby which requires expenses, so it can cause pressure.

The culture of heavy work during pregnancy when approaching labor can be dangerous for both the mother and the fetus. Mothers who work hard during pregnancy tend to give birth to babies with low birth weight [14]. Babies with LBW need to get treatment intensively until it reaches a stable condition and the stress response in the mother occurs both psychologically and physiologically which can cause the mother to experience BBS [15]. The sitting position during childbirth referred to is the delivery process assisted by a dukun and is very risky for infection because the equipment used is not sterilized beforehand [16]. Mothers who experience infection affect the wound healing process so that mothers feel anxious and can result in BBS. The se'i / roast culture is also a culture that is still being implemented. This culture requires that the mother and baby sit and sleep on a bed with burning coals underneath for 40 days. This culture can result in the possibility of mother and baby experiencing burns, the occurrence of respiratory problems for both mother and baby and affects wound healing in mothers after childbirth [17]. The most widely applied culture is not leaving the house before 40 days. This culture limits mother's interaction due to

the progress of time, education and exposure to other cultures. Culture influences society because without realizing it, culture instills a line of influence on attitudes towards various problems. There is a culture that affects the mother physically and psychologically which can trigger stress and cause the mother to experience BBS. Culture influences society because without realizing it, culture instills a line of influence on attitudes towards various problems. There is a culture that affects the mother physically and psychologically which can trigger stress and cause the mother to experience BBS. Culture influences society because without realizing it, culture instills a line of influence on attitudes towards various problems. There is a culture that affects the mother physically and psychologically which can trigger stress and cause the mother to experience BBS.

The husband is the first and most important person in providing support to his wife, before any other party. This is because the husband is the first person to know that there is a change in the partner [18].

Table 4: Distribution of Respondents based on BBS Incidents

Baby Blues Syndrome	n(%)
Yes	90 (75.6)
No	29 (24.3)

B. Bivariate Test

Table 5: Factors that influence the incidence of BBS

Factors affecting BBS	BBS		P- Value
	BBS	No BBS	
	n(%)	n(%)	
Education			
o school	0 (0)	1 (3)	0.023
Elementary School	11 (12)	1 (3)	
Junior High School	9 (10)	2 (7)	
Senior High School	52 (58)	12 (41)	
Diploma/Bachelor Degree	18(20)	13 (45)	
Type of Childbirth			
Normal	66 (73)	25 (86)	0.025
Fault	24 (27)	4 (14)	
Family Economic Status			
≥ UMR	48 (53)	23 (79)	0.005
<UMR	42 (47)	6 (21)	
Social Support			
Exist	62 (69)	17 (59)	0.039
There isn't any	28 (31)	12 (41)	

From the results of the chi square test, the factors that influence BBS include education, type of delivery, family economic status and social support. The higher the level of education, the lower the risk of getting BBS. Therefore education greatly influences the occurrence of BBS. This is because the group of mothers with higher education has a better way of

responding to a problem, self-discipline, and mindset than the group of mothers with lower education. In this study, the respondents who experienced the most BBS were those with high school education. This states that higher education influences the way of dealing with a problem, self-determination and mother's mindset. With higher education, the wider the knowledge, but that

does not mean that people with low education also have low knowledge. Pregnancy that occurs at a young age occurs in adolescents who are still students. Education influences mother's knowledge in daily baby care.

Cesarean delivery is an artificial parturition in which the fetus is born through an incision in the abdominal wall and uterine wall. Complications that occur in this procedure cause tissue trauma to both the mother and the fetus. The type of delivery is related to the complications experienced by the mother giving birth. Mothers who experience deliveries with action tend to experience complications compared to mothers who give birth normally. Mothers who give birth both normally and by cesarean can experience BBS. A greater chance of experiencing baby blues is a mother with a cesarean section. This is because the mother feels that she cannot immediately care for the newborn because the recovery condition takes longer.

Family economic status is a condition that shows the financial ability of the family and the material equipment it has. People with high or low economic levels concentrate on fulfilling needs will be different. A low economic level will concentrate higher on fulfilling the needs of family life, compared to a high

economic level. Currently, the source of family economic problems is the COVID-19 pandemic. In this study, most respondents in rural areas said that the presence of COVID-19 affected the economic status of the family, because most of the jobs of the head of the family were self-employed (farmers, laborers, motorcycle taxi drivers, fishermen) thereby reducing customers. Meanwhile, respondents in urban areas said that COVID-19 did not affect the family's economic status because they had a permanent job. Stress in the family can affect postpartum maternal depression related to the mother's emotional state if the family's socioeconomic status does not support it.

Social support is the degree of support given to individuals, especially when needed by people who have a close emotional relationship with that person, social support can refer to comfort, caring, self-esteem or any form of assistance that individuals receive from other people or groups. Social support in this study is being able to rely on partners, family and friends to help take care of the household or look after the children. Most of the mothers who received good support did not experience BBS, while most of the mothers who received less social support experienced BBS.

Table 6: Effect of Location with BBS

Postpartum Mother Location	BBS		P- Value
	BBS	No BBS	
	n(%)	n(%)	
Rural	25 (28)	12 (41)	0.176
Urban	65 (72)	17 (59)	

In Table 6 it can be seen that the majority of postpartum mothers who experience BBS are in urban areas.

C. Different test Mann Whitney Test

Table 7: Factor Difference Test Results between Rural and Urban Areas

Variable	Asymp. Sig. (2 Taileds)
Age	0.000
Education	0.029
Profession	0.001
Parity	0.010
Nutritional status	0.955
Economic status	0.000

From different test using the Mann Whitney Test obtained that there were differences in factors between rural and urban areas, namely education, employment, parity, nutritional status, type of delivery, and family economic status.

The disparity in rural and urban education is caused by the number of teaching staff where the low interest of teachers in teaching in rural areas is due to the lack of access to transportation and poor school facilities. The most important factor in overcoming this problem is the teacher. One form of government intervention in the context of overcoming the education

gap in Indonesia and as a solution to overcoming teacher problems is the SM3T program (Bachelor of Education in Frontier, Outermost and Disadvantaged Regions) [19].

Most mothers in urban areas have jobs as private and honorary employees. Meanwhile, women in the village prefer to work at home, take care of the household. Related to the education of mothers in urban areas, there are more SMA and Diploma/Bachelor degrees, making it easier for mothers to find work compared to mothers in villages. Apart from education, lifestyle also requires mothers to work.

Most mothers in urban areas give birth twice or more, and have experience caring for children from previous experiences with pregnancies that are not at risk, while in rural areas some mothers give birth for the first time and some are at risky ages. Mothers who give birth at a young age are at risk of not getting health education because of remote access and lack of transportation.

Most of the respondents in rural areas had normal BMI nutritional status (18.5-22.9) while in urban areas most of the respondents were underweight and obese. In fulfilling daily nutrition for mothers in rural areas, most of them obtain food from their own garden. In contrast to urban areas, some mothers are busy with work and prefer fast food. In addition, there are mothers who want to go on a diet, because they maintain their appearance and there are also those who cannot control their diet properly so that they become more nutritious. This is what causes most mothers in urban areas to experience malnutrition, both undernutrition and over nutrition. In rural areas, most people are still traditional, people tend to do physical activity provided that food availability is not limited.

Most of the respondents in rural areas gave birth normally, both at health facilities and at home. Respondents who gave birth at home were due to the remote access to the puskesmas and they did not have a vehicle that could take the mother to the puskesmas. Things are different for respondents who are in urban areas, some mothers give birth by cesarean section, both for medical reasons and not. There are mothers who choose to give birth by caesarean because of their own desires for certain reasons, such as fear of feeling pain during normal delivery and there are also those who want to set a date for giving birth.

Most of the respondents were in rural areas with incomes below the UMR while those in urban areas were above the UMR. Living environment influences economic status. In rural areas generally have a high level of activity and have a lower average income than in urban areas. Even though the majority of mothers in urban areas have incomes above the minimum wage, not all of their needs are necessarily met, because the needs in cities are greater than those in villages, for example the costs of transportation, water and electricity. This is related to adolescents who give birth at the age of <20 years who do not have a job because there are many needs of the mother that must be met [21].

The strength of this study is based on the factors that influence BBS to be examined from various factors different from other studies which are only one factor, and the limitations in this study are that researchers experience difficulties when collecting data because there are respondents who are not willing to be

interviewed due to the COVID- 19 pandemic and the coping stress questionnaire used not specifically for BBS events.

CONCLUSION

Postpartum mothers who experienced BBS incidents were 75.6%. There is an influence of individual characteristics of postpartum mothers on the incidence of BBS, namely education, internal factors, namely the type of delivery, and external factors, namely family economic status and social support. There are differences in the individual characteristics of postpartum mothers between rural and urban areas, namely education, employment and parity. Internal factors, namely nutritional status, and type of delivery and external factors, namely the economic status of the family. Mothers with low family economic status and education in rural areas need capacity building efforts through training (cooking and sewing) and education (counseling). Class activities for pregnant women by involving partners or families to increase social support.

Thank-you note

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