

# The Relationship Between Pregnant Women With Kek and The Birth of Lbw Babies in The Work Area of Bere-Bere Community Health Center

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**Abstract:** Low Birth Weight (LBW) is one of the indicators of infant health that is greatly influenced by the nutritional status of the mother during pregnancy. Pregnant women with poor nutritional status have a higher risk of giving birth to babies with low birth weight. This study was conducted to examine the relationship between the nutritional status of pregnant women and the incidence of LBW in the work area of bere-bere community health center work area. This study aims to determine the relationship between the nutritional status of pregnant women and the incidence of LBW at the work area of bere-bere community health center in 2023. This study used an observational analytical design with a cross-sectional approach. The number of respondents was 16 pregnant women selected through a purposive sampling technique. Data were collected by measuring nutritional status using Body Mass Index (BMI) before pregnancy and collecting medical record data on the baby's birth weight. Statistical analysis was performed using the Chi-Square test with a significance level of 0.05. Results: Based on the results of the analysis, it was found that out of 16 respondents, 6 pregnant women (37.5%) with poor nutritional status gave birth to babies with LBW, while 10 pregnant women (62.5%) with normal nutritional status gave birth to babies with normal weight. The results of the statistical test showed a p-value of 0.000 ( $p < 0.05$ ), which indicated a significant relationship between the nutritional status of pregnant women and the incidence of LBW. There is a significant relationship between the nutritional status of pregnant women and the incidence of LBW. Pregnant women with poor nutritional status have a higher risk of giving birth to babies with LBW. It is recommended that health workers at the work area of bere-bere community health center be more active in providing education and monitoring the nutritional status of pregnant women through nutritional counseling and regular pregnancy check-ups. Nutrition intervention programs also need to be strengthened to prevent the incidence of LBW

**Keywords:** Chronic Energy Deficiency, Low Birth Weigh, Nutrition, Pregnancy, Pregnant Women

## 1. Introduction

Low Birth Weight (LBW) is an important indicator in determining the health status of newborns. Babies with a birth weight of less than 2,500 grams have a higher risk of various health complications, such as growth disorders, decreased immune system, and increased risk of neonatal death. The incidence of LBW is also one of the health problems that is still often found, especially in developing countries, including Indonesia.

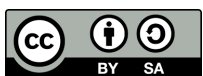
Received: April 16, 2025

Revised: May 12, 2025;

Accepted: June 19, 2025

Published : June 30, 2025

Curr. Ver.: June 30, 2025



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The nutritional status of pregnant women is one of the main factors that affects the baby's birth weight. Mothers with poor nutritional status during pregnancy tend to experience obstacles in fetal growth, which can ultimately lead to LBW. Optimal nutrition during pregnancy is not only important for maternal health but also has a direct impact on fetal development, especially in the second and third trimesters, when fetal growth occurs significantly.

In the Work Area Of Bere-Bere Community Health Center work area, the incidence of LBW is still a significant challenge. Local data shows that several pregnant women who check themselves at the Work Area Of Bere-Bere Community Health Center have poor nutritional status, which contributes to the high number of babies born with low birth weight. Factors such as lack of maternal knowledge about the importance of nutrition, unbalanced diet, and access to health services affect the nutritional status of pregnant women in this area.

In addition, local culture and eating habits can also affect the nutritional status of pregnant women. In some cases, the food intake of pregnant women is more influenced by tradition or myth than by actual nutritional needs. This adds complexity to efforts to address nutritional problems in pregnant women, especially in rural areas such as Hikun.

The relationship between the nutritional status of pregnant women and the incidence of LBW has been widely proven through previous studies. A study by showed that pregnant women with good nutritional status were less likely to give birth to babies with LBW compared to pregnant women who were malnourished. These results emphasize the importance of nutritional interventions during pregnancy as an effort to reduce the prevalence of LBW.

To overcome this problem, an integrated approach is needed. Education for pregnant women about the importance of maintaining nutritional status, regular pregnancy check-ups, and providing additional supplements such as iron tablets are some strategies that can be done to prevent the incidence of LBW. The role of health workers, such as midwives and doctors, is very important in ensuring that pregnant women receive adequate information and support during pregnancy. This study aims to analyze the relationship between the nutritional status of pregnant women and the incidence of LBW in the Work Area Of Bere-Bere Community Health Center work area. By understanding this relationship, it is hoped that the results of the study can provide recommendations for improving maternal health interventions, so that the incidence of LBW can be significantly reduced in the future.

## **2. Research Method**

This study used an observational analytical design with a cross-sectional approach. The number of respondents was 16 pregnant women selected through a purposive sampling technique. Data were collected by measuring nutritional status using Body Mass Index (BMI) before pregnancy and collecting medical record data on the baby's birth weight. Statistical analysis was performed using the Chi-Square test with a significance level of 0.05.

### 3. Results and Discussion

#### Results

**Table 1 Respondent Characteristics**

Information	Frequency	Percent
<b>Mother's Age</b>		
>20 year	16	100.0
<b>Mother's Job</b>		
IRT	16	100.0
<b>Mother's Education</b>		
SMA	16	100.0

From table 1 above, all 16 respondents (100%) are > 20 years old. All 16 respondents (100%) are housewives. All 16 respondents (100%) have a high school education.

**Table 2 Maternal Health Status \* LBW Crosstabulation**

Information		LBW Incident	
		LBW	Total
<b>Maternal Health Status</b>	<b>Chronic energy deficiency</b>	16	16
<b>Total</b>		16	16
<b>Uji Chi square</b>			0.000

Based on table 2 above, all 16 respondents obtained the test results obtained 0.000, p-value <0.05 which means Ho is rejected and Ha is accepted. There is a Relationship between Maternal Condition and the Incidence of Low Birth Weight

#### Discussion

Based on table 2, the results of the statistical test show a p-value of 0.000, which is smaller than 0.05. This shows that there is a significant relationship between the nutritional status of pregnant women and the incidence of low birth weight (LBW). These results strengthen previous findings which state that the nutritional status of mothers during pregnancy has a direct impact on the baby's birth weight. Pregnant women with poor nutrition tend to experience fetal growth retardation, which can lead to a higher risk of giving birth to babies weighing less than 2,500 grams.

The nutritional condition of pregnant women is an important factor that affects fetal growth, especially in the second and third trimesters of pregnancy. Poor nutrition during pregnancy can cause placental insufficiency and inhibit the flow of nutrients from the mother to the fetus. As a result, the fetus does not get enough intake to grow optimally, which ultimately causes the incidence of LBW. In addition, deficiencies in macronutrients such as protein and micronutrients such as iron, calcium, and folic acid can also worsen this condition.

Mothers' knowledge about the importance of nutritional intake during pregnancy greatly influences their diet and fulfillment of daily nutritional needs. A study by found that mothers with low levels of knowledge about nutrition tend to have an unbalanced diet, which has an impact on their poor nutritional status during pregnancy. This can also be exacerbated by local myths or eating habits that are not in accordance with the nutritional needs of pregnant women.

Support from the family, especially the husband, also plays an important role in ensuring that pregnant women can meet their nutritional needs. Research shows that pregnant women who receive emotional and financial support from their families tend to have better diets and reduce the risk of giving birth to babies with LBW. Therefore, nutrition education needs to be targeted not only at pregnant women, but also at other family members who play a role in daily decision-making.

The results of this study also show the importance of the role of health workers in routinely monitoring the nutritional status of pregnant women. Regular pregnancy check-ups (ANC) allow midwives or doctors to detect early signs of malnutrition and provide appropriate interventions, such as iron supplements or prenatal vitamins. This intervention has been proven effective in improving maternal nutritional status and preventing the incidence of LBW.

In addition to individual and family factors, accessibility to health services is also an important factor in preventing LBW. Pregnant women who have limited access to health facilities tend not to receive routine pregnancy check-ups and are less informed about the importance of nutritional intake. Therefore, efforts need to be made to expand the reach of health services, especially in rural areas such as the Work Area Of Bere-Bere Community Health Center.

Overall, this study provides evidence that the nutritional status of pregnant women has a significant relationship with the incidence of LBW. Comprehensive interventions, including nutrition education, providing family support, and increasing access to health services, need to be implemented to reduce the incidence of LBW. With an integrated approach, it is hoped that the LBW rate can be reduced, thereby improving the quality of maternal and infant health in the Work Area Of Bere-Bere Community Health Center .

#### **4. Conclusion**

Based on the results of the study, a p-value of 0.000 ( $p < 0.05$ ) was obtained, indicating a significant relationship between the nutritional status of pregnant women and the incidence of low birth weight (LBW) in the Work Area Of Bere-Bere Community Health Center. This confirms that the nutritional status of mothers during pregnancy affects fetal growth and birth weight.

Pregnant women with good nutritional status tend to have a lower risk of giving birth to babies with LBW compared to pregnant women who are malnourished. Good nutritional status allows the fetus to get sufficient nutritional intake for optimal growth and development during pregnancy.

The importance of macro and micro nutrient intake during pregnancy is not only for maternal health, but also to prevent pregnancy complications, including the risk of LBW. Family support, nutritional education, and access to adequate health services play an important role in ensuring that pregnant women can meet their nutritional needs.

The results of this study emphasize the need for nutritional interventions for pregnant women, such as providing iron supplements, prenatal vitamins, and education about healthy eating patterns during pregnancy. In addition, regular pregnancy check-ups (ANC) need to be strengthened to detect the risk of malnutrition early and provide appropriate treatment.

To reduce the incidence of LBW, an integrated effort is needed involving the government, health workers, and the community in providing nutrition education, family support, and access to better health services, especially in rural areas. This study can also be the basis for more effective nutrition intervention programs and maternal and child health policy planning in the future. Thus, the quality of maternal and infant health in the Work Area Of Bere-Bere Community Health Center can continue to be improved.

## References

- American College of Obstetricians and Gynecologists. (2017). Practice Bulletin No. 179: Bacterial Vaginosis in Pregnancy. *Obstetrics & Gynecology*, 130(2), e1-e17.
- Black, R. E., Victora, C. G., Walker, S. P., Bhutta, Z. A., Christian, P., de Onis, M., ... & Uauy, R. (2013). Maternal and child undernutrition and overweight in low-income and middle-income countries. *The Lancet*, 382(9890), 427-451.
- Dinh, H. T., Nguyen, T. M., & Nguyen, Q. T. (2020). Factors influencing maternal health care utilization in Vietnam: A cross-sectional study. *BMC Public Health*, 20(1), 1245. <https://doi.org/10.1186/s12889-020-08987-5>
- Indrawati, S. (2014). Hubungan Status Gizi Ibu Hamil dengan Kejadian BBLR di Puskesmas Minggir Sleman Yogyakarta. Universitas 'Aisyiyah Yogyakarta. DIGILIB.UNISAYOGYA.AC.ID
- Koye, D. N., & Yusuf, N. (2015). Maternal health care service utilization and its determinants among rural women in Ethiopia. *BMC Pregnancy and Childbirth*, 15(1), 139. <https://doi.org/10.1186/s12884-015-0622-7>
- Li, M., Guo, Y., & Li, X. (2018). Antenatal care and its impact on maternal and neonatal health outcomes in China. *PLOS ONE*, 13(6), e0199560. <https://doi.org/10.1371/journal.pone.0199560>
- Lubaba, Z. (2017). Hubungan Status Gizi Ibu Hamil dengan Kejadian BBLR di Puskesmas Hikun Kabupaten Tabalong. Skripsi DIV Kebidanan, Universitas Sari Mulia. REPOSITORY UNIVERSITAS SARI MULIA
- Mazita, N., et al. (2019). Hubungan Status Gizi dan Usia Ibu Hamil dengan Kejadian BBLR di Kota Makassar. *Jurnal Kesehatan Masyarakat*, 15(1), 25-32. JURNALP4I.COM
- Nair, S. S., & Goudar, S. S. (2015). Utilization of antenatal care and its impact on maternal and neonatal health outcomes in rural areas of India: A cohort study. *BMC Pregnancy and Childbirth*, 15(1), 73. <https://doi.org/10.1186/s12884-015-0482-0>
- Purwanti, Y. (2017). Hubungan Perilaku Ibu dengan Status Gizi Balita di Wilayah Kerja Puskesmas Hikun Kabupaten Tabalong. Skripsi DIV Kebidanan, Universitas Sari Mulia. REPOSITORY UNIVERSITAS SARI MULIA
- Rahmawati, D. (2023). Hubungan Status Gizi Ibu Hamil dengan Berat Badan Lahir Rendah (BBLR) di Rumah Sakit St. Madyang Kota Palopo. *UNM Environmental Journal*, 6(3), 52-58. UNM JOURNAL
- Sari, D. P., & Widiyati, J. (2019). Hubungan Status Gizi Ibu Hamil dengan Kejadian Bayi Berat Lahir Rendah di Wilayah Kerja UPTD Puskesmas Ngarip Kecamatan Ulu Belu Tahun 2019. *Jurnal Gizi dan Kesehatan*, 10(2), 123-130. JOURNAL.AISYAHUNIVERSITY.AC.ID

- Sari, D. P., & Widiyati, J. (2019). Hubungan Status Gizi Ibu Hamil dengan Kejadian Bayi Berat Lahir Rendah di Wilayah Kerja UPTD Puskesmas Ngarip Kecamatan Ulu Belu Tahun 2019. *Jurnal Gizi dan Kesehatan*, 10(2), 123-130. JOURNAL.AISYAHUNIVERSITY.AC.ID
- Sari, D. P., & Widiyati, J. (2020). Hubungan Status Gizi Ibu Hamil dengan Kejadian BBLR di PMB Johana Widiyati Kabupaten Tulungagung. *Jurnal Bidan*, 6(1), 45-52. JOURNAL.UNITA.AC.ID
- Skripsi Ners B. (2013). Hubungan Status Gizi dengan Derajat Hipertensi di Wilayah Kerja UPT Puskesmas Jaro Kabupaten Tabalong. SCRIBD
- Titaley, C. R., Dibley, M. J., & Roberts, C. L. (2010). Determinants of maternal health care utilization in Indonesia: A multilevel analysis. *BMC Public Health*, 10(1), 264. <https://doi.org/10.1186/1471-2458-10-264>
- WHO. (2015). Global Nutrition Targets 2025: Policy Brief Series. World Health Organization.
- WHO. (2016). Guideline: Daily iron and folic acid supplementation in pregnant women. World Health Organization. *Jurnal Kebidanan*, 10(1), 45